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WEALTH AND PROGRESS

OF

NEW SOUTH WALES

THE

WEALTH AND PROGRESS

OF

NEW SOUTH WALES

1895-6.

BY

T. A. COGHLAN,
GOVERNMENT STATISTICIAN.

IN TWO VOLUMES—VOLUME I.

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PREFACE.

In preparing a work of this kind a difficulty is always experienced in making it interesting to persons outside the Colony who are not concerned about the details of local affairs, and at the same time useful to those who are engaged in the active life of the Colony and who require such details. It is believed that the difficulty has been fairly met. Every care has been taken to correct such errors as may have passed through previous editions, and to keep this issue free from them. If, however, any such should be discovered, it would be deemed a favour if their nature and position were pointed out.

It has been thought desirable, except in special cases, to limit the period covered by the tables to ten years. Should more detailed figures be required they will be found in the "Statistical Register." The necessity of comparing the progress of New South Wales with that of the other Colonies, except on the more important points, is obviated by the publication of "The Seven Colonies of Australasia," which deals with the Colonies as a whole, as well as with their individual resources.

Sydney, 14*th April*, 1897.

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HISTORICAL SKETCH.

IT is impossible to say who were the first discoverers of Australia, although there is evidence that the Chinese had some knowledge of the continent as far back as the Thirteenth Century. The Malays also would seem to have been acquainted with the northern coast; while Marco Polo, who visited the East at the close of the Thirteenth Century, makes reference to the reputed existence of a great southern continent. There is in existence a map, dedicated to Henry the Eighth of England, on which a large southern land is shown, and the tradition of a Terra Australis appears to have been current for a long period before it enters into authentic history.

In 1503, a French navigator named Binot Paulmyer, Sieur de Gonneville, was blown out of his course, and landed on a large island, which was claimed to be the great southern land of tradition, although Flinders and other authorities are inclined to think that it must have been Madagascar. The Portuguese also advance claims to be the first discoverers of Australia, but so far the evidence cannot be said to establish their pretensions. As early as 1598, Wytfliet describes the Australis Terra as the most southern of all lands, and proceeds to give some circumstantial particulars respecting its geographical relation to New Guinea, venturing the opinion that, were it thoroughly explored, it would be regarded as a fifth part of the world.

Early in the Seventeenth Century, Philip the Third of Spain sent out an expedition from Callao, in Peru, for the purpose of searching for a southern continent. The little fleet comprised three vessels, with the Portuguese pilot, De Quiros, as navigator, and De Torres as admiral, or military commander. They left Callao on the 21st December, 1605, and in the following year discovered the island now known as Espiritu Santo, one of the New Hebrides Group, which De Quiros, under the impression that it was indeed the land of which he was in search, named "*La Austrialia del Espiritu Santo.*" Sickness and discontent led to a mutiny on De Quiros' vessel, and the crew, overpowering their officers during the night, forced the captain to navigate his ship to Mexico. Thus abandoned by his consort, De Torres, compelled to bear up for the Philippines to refit, discovered and sailed through the strait that bears his name, and may even have caught a glimpse of the northern coast of the Australian Continent. His discovery was not, however, made known until 1792, when Dalrymple rescued his name from oblivion by bestowing it upon the passage which separates New Guinea from Australia. De Quiros returned to Spain to re-engage in the work of petitioning the king to despatch an expedition for the purpose of prosecuting the discovery of the Terra Australis. He was finally successful in his petitions, but died before accomplishing his work, and was buried in an unknown grave in Panama, never being privileged to set his foot upon the continent the discovery of which was the inspiration of his life.

During the same year in which De Torres sailed through the strait destined to make him famous, a little Dutch vessel called the Duyfhen, or dove, set sail from Bantam, in Java, on a voyage of discovery. This ship entered the Gulf of Carpentaria, and sailed south as far as Cape Keerweer, or turn-again. Here some of the crew landed, but being attacked by natives, made no attempt to explore the country. In 1616, Dirk Hartog discovered the island bearing his name. In 1622 the Leeuwin, or lioness, made some discoveries on the south-west coast; and during the following year Jan Carstens, with the yachts Pera and Arnhem, explored the shores of the Gulf of Carpentaria. Arnhem Land, a portion of the Northern Territory, still appears on many maps as a memento of this voyage. Among other early Dutch discoverers were Van Edels; Poel, in 1629, in the Gulf of Carpentaria; the unknown captain of the Gulde Zeepaard, along the southern coast, which he called Nuyts Land; De Witt; and Pelsart, in the Batavia. Pelsart was wrecked on Houtman's Abrolhos; his crew mutinied, and he and his party suffered greatly from want of water. The record of his voyage is interesting from the fact that he was the first to carry back to Europe an authentic account of the western coast of Australia, which he described in any but favourable terms. In 1642, Abel Janszen Tasman took up the work of Dutch discovery, and added Tasmania (long known as Van Diemen's Land), and New Zealand to the geographical knowledge of the day. He subsequently made a voyage to the Gulf of Carpentaria, and examined the northern coast.

The first English navigator to sight the Australian continent was William Dampier, who made a visit to these shores in 1688, as supercargo of the Cygnet, a trader, whose crew had turned buccaneers. On his return to England he published an account of his voyage, which resulted in his being sent out in the Roebuck in 1699 to further prosecute his discoveries. To him we owe the exploration of the coast for about 900 miles—from Shark Bay to Dampier's Archipelago, and thence to Roebuck Bay. He appears to have landed in several places in search of water. His account of the country was quite as unfavourable as Pelsart's. He described it as barren and sterile, and almost devoid of animals, the only one of any importance somewhat resembling a racoon—

a strange creature, which advanced by great bounds or leaps instead of walking, using only its hind legs, and covering 12 or 15 feet at a time. This is the first notice of the kangaroo which has come down to us. Between Dampier's first and second voyage Vlamingh visited the south-west coast, and entered and named the Swan River, so called from the number of black swans in the locality.

The great voyage of James Cook, in 1769-70, was primarily undertaken for the purpose of observing the transit of Venus, but he was also expressly commissioned to ascertain "whether the unexplored part of the Southern Hemisphere be only an immense mass of water, or contain another continent." The vessel fitted out for the voyage was a small craft of 320 tons, carrying twenty-two guns. She was built originally for the coal service, with a view rather to strength than to speed. Chosen by Cook himself, she was renamed the Endeavour, in allusion to the great work which her commander was setting out to achieve. Mr. Charles Green was commissioned to conduct the astronomical observations, and Sir Joseph Banks and Dr. Solander were appointed botanists to the expedition. After successfully observing the transit from the island of Tahiti, or Otaheite, as Cook wrote it, the Endeavour's head was turned south, and then north-west, beating about the Pacific in search of the eastern coast of the great continent whose western shores had been so long known to the Dutch. Circumnavigating and minutely surveying New Zealand, Cook then stood due west, in order to carry out the instructions given him.

After a voyage of nearly three weeks, Cook, on the 19th April, 1770, sighted the eastern coast of Australia, at a point which he named after his first lieutenant, who discovered it, Point Hicks. This he placed in latitude 38° south and longitude 148° 50′ east; but no such headland has since been identified, and it is thought Cook must have been deceived in some manner by the sandhills of the Ninety-mile Beach. Four leagues farther to the north-east he discovered and named Ram Head, but the first important point observed was a bare and sandy headland, to which he gave the name of Cape Howe.

After passing and naming Mount Dromedary, the Pigeon House, Point Upright, Cape St. George, and Red Point, Botany Bay was discovered on the 28th April, 1770, and as it appeared to offer a suitable anchorage, the Endeavour entered the bay and dropped anchor. The ship brought-to opposite a group of natives, who were cooking over a fire. Cook and his crew, unacquainted with the character of the Australian aborigines, were not a little astonished that these natives took no notice of them or their proceedings. Even the splash of the anchor in the water, and the noise of the cable running out through the hawse hole, in no way disturbed them at their occupation, or caused them to evince the slightest curiosity. But as the captain of the Endeavour ordered out the pinnace and prepared to land, the natives threw off their nonchalance; for on the boat approaching the shore, two men, each armed with a bundle of spears, presented themselves on a projecting rock and made threatening signs to the strangers. It is interesting to note that the ingenious "wommera," or throwing-stick, which is peculiar to Australia, was first observed on this occasion. As the men were evidently determined to oppose any attempt at landing, a musket was discharged between them, in the hope that they would be frightened by the noise, but it produced no effect beyond causing one of them to drop his bundle of spears, of which, however, he immediately repossessed himself, and with his comrade resumed the same menacing attitude. At last one cast a stone towards the boat, which earned him a charge of small shot in the leg. Nothing daunted, the two ran back into the bush, and presently returned furnished with shields made of bark, with which to protect themselves from the firearms of the crew. Such intrepidity is certainly worthy of passing notice. Unlike the American Indians, who supposed Columbus and his crew to be supernatural beings, and their ships in some way endowed with life, and who were thrown into convulsions of terror by the first discharge of firearms which they witnessed, these Australians were neither excited to wonder by the ship, nor overawed by the superior number and unknown weapons of the strangers. Cook examined the bay in the pinnace, and landed several times; but by no endeavour could he induce the natives to hold any friendly communication with him. The well-known circumstance of the great variety of new plants here obtained, from which Botany Bay derives its name, should not be passed over. Before quitting the bay the ceremony was performed of hoisting the Union Jack, first on the south shore, and then near the north head, formal possession of the territory being thus taken for the British Crown. During the sojourn in Botany Bay the crew had to perform the painful duty of burying a comrade—a seaman named Forby Sutherland, who was in all probability the first British subject whose body was committed to Australian soil.

After leaving Botany Bay, Cook sailed northward. He saw and named Port Jackson, but forebore to enter the finest natural harbour in Australia. Broken Bay and other inlets, and several headlands, were also seen and named, but the vessel did not come to an anchor till Moreton Bay was reached, although the wind prevented Cook from entering this harbour. Still sailing northward, taking notes as he proceeded for a rough chart of the coast, and landing at Bustard and Keppel Bays and the Bay of Inlets, Cook passed over 1,300 miles without the occurrence of any event worthy of being chronicled, till suddenly one night at 10 o'clock the water was found to shoal, without any sign of breakers or land. While Cook was speculating on the cause of this phenomenon, and was in the act of ordering out the boats to take soundings, the Endeavour struck heavily, and fell over so much that the guns, spare cables, and other heavy gear had to be at once thrown overboard to lighten the ship. As day broke, attempts were made to float the vessel off with the morning tide; but these were unsuccessful. The water was rising so rapidly in the hold that with four pumps constantly going the crew could hardly keep it in check. At length one of the midshipmen suggested the device of "fothering," which he had seen practised in the West Indies. This consists in passing a sail, attached to cords, and charged with oakum, wool, and other things, under the vessel's keel, in such a manner that the suction of the leak may draw the canvas into the aperture, and thus partially stop the vent. This was performed with great success, and the vessel was floated off with the evening tide. The land was soon after made, near the mouth of a small stream, which Cook called, after the ship, the Endeavour River. A headland close by he named Cape Tribulation. The ship was steered into the river, and there careened and thoroughly repaired. Cook having completed the survey of the east coast, to which he gave the name of New South Wales, sighted and named Cape York, the northernmost point of Australia, and took final possession of his discoveries from latitude 38° south northward to latitude 10½° south, on a spot which he named Possession Island, thence returning to England by way of Torres Straits and the Indian Ocean.

The favourable reports brought to England by the Endeavour on her return, and the graphic account of his voyage published by Cook, together with the fact that Great Britain had just lost her North American colonies by their successful rebellion, turned all eyes to Australia, or New Holland, as it continued to be called. The difficulty of disposing of their criminal population was only one of the causes which determined the Government of the day to found the colony of New South Wales; for it will become evident, as this narrative proceeds, that all concerned felt they were engaged in founding a new home in the Southern Hemisphere for the British people, and that visions of even greater progress than has yet been attained filled the minds, not only of Viscount Sydney and Governor Phillip, but also of many reflecting persons in the colony itself after it had been established. The truth of this view is amply demonstrated by the testimony of several contemporary writers.

It was in the early part of 1787 that Viscount Sydney, Secretary of State for the Colonies, determined to plant a colony in New South Wales, and by May of that year the First Fleet had been assembled. It consisted of the 20-gun frigate Sirius, the armed tender Supply, three storeships—the Golden Grove, Fishburn, and Borradale; and six transports—the Alexander, Scarborough, Lady Penrhyn, Prince of Wales, Friendship, and Charlotte. The largest of these vessels measured only 450 tons, and the smallest was no more than 270 tons. On board of the six transports were packed, according to the statement made by Collins in his history, no fewer than 564 men and 192 women, all prisoners who had been sentenced to expatriation. There were also carried 168 marines and 10 officers, commissioned and non-commissioned. These, with 5 medical men, a few mechanics, and 40 women—wives of marines—together with 13 children—the offspring of the convicts—

made up the total number of persons despatched to found the colony. Captain Phillip, R.N., was placed in command of the expedition, and given a commission as Governor and Captain-General of New South Wales. Second in command was Captain John Hunter, of the Sirius, and Mr. David Collins accompanied the expedition as Judge-Advocate.

The fleet sailed in May, 1787, and after calling at Rio Janeiro, arrived in Botany Bay in the beginning of January, 1788. A cursory examination convinced Captain Phillip that a more unsuitable site for a new settlement could hardly have been chosen than the shores of this inlet. Despite the profusion of new plants which had so delighted Banks and Solander, the neighbourhood of Botany Bay is by no means fertile. The scarcity of good water was a further disadvantage, while the bay itself was so shallow as to forbid the ships approaching the shore, to do which would have necessitated the erection of piers and jetties of great length. It was, besides, exposed to the full swell of the Pacific, without bays, creeks, or coves to afford shelter. The Governor accordingly determined to explore the coast in search of a more suitable site for the settlement. After proceeding with three of the boats about nine miles, he found himself abreast of the entrance to Port Jackson, which Cook had only seen from a distance, and had marked on his chart as a harbour for boats. Undeterred by this, Phillip rounded the South Head, and soon saw opening before him the whole expanse of one of the finest harbours in the world. For miles to the west stretched the peaceful waters of Port Jackson, which must have delighted the minds of the explorers, disheartened as they had been by the appearance and surroundings of Botany Bay. In place of the stunted scrub which formed the greater part of the vegetation of that locality, Port Jackson was found to be surrounded by a thick forest of noble trees, which extended to the water's edge, and promised an abundant supply of timber for building purposes. In place of the open roadstead at Botany, a countless succession of bays and inlets opened on the astonished gaze of the hardy navigators as they proceeded up the harbour. Deep water was found to extend to the very base of the rocks, thus obviating any necessity for expensive wharves, the construction of which must have occupied the little community for many months, to the neglect of more immediately pressing wants.

The Governor's choice of the site of the present metropolis of Australasia was determined by the fact that, about six miles from the entrance, an apparently perennial stream of the purest water was found discharging itself into a beautiful sandy inlet, which was named Sydney Cove, in honour of the statesman under whose auspices the enterprise had been undertaken. Before finally deciding on this site, Captain Phillip spent three days in exploring the various bays, but was confirmed in his original choice by the fact that no such stream of water had been found elsewhere, though in other respects numerous positions equally suitable presented themselves.

Returning immediately to Botany, preparations were made for bringing the colony round to Sydney Cove, when, as the fleet was standing out of the bay, an interesting incident occurred—two strange vessels, evidently making for the entrance, were discerned in the offing. Captain Phillip went out in the Supply to meet them, and they proved to be a French exploring party under the command of Jean François Galaup, Comte de la Pérouse, their vessels being the frigates Astrolabe and Boussole. After an interchange of courtesies, the French were left to refresh and refit in Botany Bay. They stayed there till March, 1788, and buried one of their company on shore—Father Le Receveur, of the Order of St. Francis, the naturalist of the expedition, who died of wounds received in an encounter with the natives of the South Seas. His tomb is still extant at La Pérouse, near the north head of Botany Bay, where also a monument was placed, in the year 1825, to the memory of the commander of the expedition, who was shipwrecked and whose crew were murdered at Vanikoro, one of the Santa Cruz Islands. The monument was erected by Messrs. De Bougainville and Ducampier, commanding the French war vessels Thétis and Espérance, then lying in Port Jackson.

On Captain Phillip's arrival in Sydney Harbour, on the memorable 26th January, 1788, the ships anchored in the Cove, and preparations were at once made for landing the colonists. The clearing of the ground in the vicinity, and along the banks of the little stream, was commenced, and when a sufficient space had thus been obtained a flagstaff was erected, and the Union Jack run up. After the firing of three volleys by the marines, the Governor read his commission, and addressed words of counsel, warning, and encouragement to the prisoners, the ceremony closing with general festivity. Arduous labour succeeded this scene, for it was well understood that unless the settlers could raise supplies for themselves, the existence of the colony would be precarious, as the store of provisions in their possession was calculated to last only a very short time.

Accordingly, ground was cleared at the head of Farm Cove, adjoining the settlement, and an attempt was made to raise wheat, but time has shown that the soil in the immediate neighbourhood of Sydney is not suited to the cultivation of this cereal, and even if a good crop had been obtained the colonists must have starved while it was maturing. No food worth mentioning was procured from the land, and the little community was on the brink of starvation, when a ship arrived with another batch of colonists, but without stores. This brought matters to a climax, whereupon Governor Phillip sent the Sirius to the Cape Colony, and the Supply to Batavia, to procure provisions, which, however, could only be obtained in insufficient quantity, so that in a few weeks after the return of these vessels the state of affairs became as bad as before, and starvation again stared the colony in the face. Under these circumstances, everyone, including the Governor himself, was placed on short allowance, and even the sheep and cattle which had been reserved for breeding purposes were killed for food. In this aspect of affairs the Governor bethought himself of Norfolk Island, whither, shortly after his arrival, he had sent Lieutenant Philip Gidley King, of the Sirius, to establish a branch colony. A detachment of 200 convicts, with a guard of 70 marines, was, therefore, despatched to the island. On arrival, it was found that King and his men had cleared a considerable portion of land, and had succeeded in raising an abundant crop. But the Sirius, in which the new detachment sailed, was wrecked on a reef off the island, so that no supplies were procured thence at that time.

When the prospects of the settlement at Sydney Cove had reached their gloomiest, three store-ships arrived, and snatched the colony from the very brink of destruction by famine. This tided over the difficulty, and so great a privation of food was never again experienced. Fresh difficulties, however, beset the settlers by the arrival of some ship-loads of prisoners, most of whom were in a sick and dying condition. Of 1,700 men and women who had been embarked, 200 died on the voyage, and several hundred more were found to be *in extremis* on arrival. In the midst of these horrors, the Governor's responsibilities were further increased by the attempts of some of the prisoners to escape from the colony. Some took to the bush; others stole boats and put to sea, intending to reach the Dutch settlements in the Indian Ocean. Daring as this latter attempt may appear, it was in once instance successful: two men and a woman, in an open boat, succeeded in reaching Timor, where they were imprisoned and sent back to Sydney on the first opportunity. Numerous efforts were made to escape from the settlement by land, the ignorance of the convicts being such that many imagined they could walk overland to China, and not a few perished in the bush while making the attempt.

Governor Phillip's health gave way under the cares and anxieties of his office, and in 1792 he returned to England, where he received a pension in reward for his exertions in founding the colony, and died at an advanced age. Major Grose and Captain Paterson, officers in charge of the military, administered the government till the arrival of his successor. In 1795, Captain Hunter, who after the loss of the Sirius had gone to England, arrived as the second Governor. With the arrival of Governor Hunter affairs took a new turn. He brought out a number of free settlers, mostly farming men; and some fine alluvial land having been discovered on the banks of the Hawkesbury, farming was successfully begun, and in a short time more than 6,000 acres were under crops of wheat and maize. The attempts to introduce cattle were for a time unsuccessful, but in 1796 a herd of 60 head was discovered at the "Cowpastures," near Camden. These were the descendants of some cattle which had strayed from the settlement several years before. Though their quality was found to have deteriorated, they proved a very welcome addition to the live stock of the settlement. In 1800, when Captain Hunter left the colony, the population was over 6,000; attempts had been made to penetrate into the interior, but without success; the

Hunter River and its coal-mines had been discovered, and the mines were being worked by a detachment of prisoners; the city of Newcastle had been founded; and the New South Wales Corps, a military body enlisted for service in the colony (the first detachments of which had arrived in 1790), formed an efficient garrison and guard over the more refractory prisoners. During Governor Hunter's term of office, Bass and Flinders minutely examined the coast to the south of Sydney, in a small boat only 9 feet over all; and the former discovered the strait which bears his name, thus proving Tasmania to be an island, and not the southern extremity of the continent, as previously supposed.

The next Governor was Philip Gidley King, previously mentioned as the Lieutenant of the Sirius who had been despatched by Phillip to found a settlement on Norfolk Island. Though all fears of famine had now disappeared, Governor King soon found himself involved in difficulties of a scarcely less distressing nature. To explain these it will be necessary to describe the constitution of the New South Wales Corps. This body had been specially raised for service in the colony, the officers of the King's regiments not unnaturally objecting to be sent to such a far distant settlement, where they knew that they would find no intellectual occupation, and where their sole work would consist in acting as a prison guard, or, at most, in making a few raids, in alleged reprisals for the misdeeds of the ill-used, and often sorely provoked, aborigines. As a military guard of some sort was necessary, this corps was raised, and a few enterprising spirits—many of whom had never served before—were induced to accept commissions, with the view of obtaining grants of land and making their fortunes in the colony. Unfortunately, the readiest means to this end was found in the import trade, and as rum was in great request, the officers of the New South Wales Corps became importers of that spirit in large quantities—and even set up private stills in defiance of a Government order. Governor King was specially commissioned to put a stop to the traffic, a full account of which will be found in another part of this volume. King proceeded to act with great promptitude, and his vigorous proceedings in sending away thousands of gallons of spirits and wine created a storm of indignation among the importers, and greatly embittered the officers of the New South Wales Corps against the Government.

During King's time, a serious mutiny occurred among the prisoners. The more tractable of these were "assigned" as servants to the settlers, and engaged in working the farms and squattages; but the more reckless characters, made desperate in many instances by the treatment they received, were worked on the roads, in chain-gangs. A party of over 300 of these chain-gang men was employed at Castlehill, on the road between Parramatta and Windsor. These men, taking advantage of the small number of their guard, abandoned their work, managed to remove their irons, seized some firearms, and marched towards the Hawkesbury, expecting to be reinforced by the men employed in the neighbourhood.

But Major Johnston, second in command of the New South Wales Corps, pursued them with only twenty men, and on coming up with them, charged with such precipitation that the mutineers were fain to lay down their arms and beg for mercy. Three or four of the ringleaders were afterwards hanged; but the rest were permitted to return to their duty on undertaking to be of good conduct for the future.

An event of the utmost importance to the colony also took place under the administration of Governor King. This was the initiation of wool-growing. John Macarthur, who had held a commission as captain in the New South Wales Corps, procured, with great trouble and by much perseverance, some Spanish merinos, and having obtained a grant of 10,000 acres of land across the Cowpasture River, which estate he named "Camden," commenced the growth of wool on a large scale. In a short time his enterprise showed every sign of a successful issue, to the great benefit of the colony generally, and to his own personal advantage. In spite of these evident signs of material progress, however, Governor King was so worn out with the conflicts caused by his endeavours to suppress the rum traffic, and was in such constant collision with the officers of the New South Wales Corps on that account, that he seized the first opportunity of leaving the colony, and was succeeded in the Government, in 1806, by William Bligh, a post-captain in the Navy.

Governor Bligh was a distinguished naval officer. His wonderful voyage after the Mutiny of the Bounty had caused the Imperial Government to entertain a high opinion of his conduct, as well as of his courage and determination. His services were numerous, and he had been publicly thanked by Lord Nelson, after the bombardment of Copenhagen, for the gallantry and skill which he displayed on that occasion. Hence he was selected as a fit man to crush the clique of officers engaged in the rum traffic, and to purify official life in the colony. King had been only partially successful in this direction, and the British Government gave the strictest injunctions to Captain Bligh to stop the trade in spirits. Accordingly, in February, 1807, he issued the following general order:— "His Excellency the Governor laments to find by his late visit through the colony that the most calamitous evils have been produced by persons bartering, or paying, spirits for grain of all kinds, and the necessaries of life in general, and to labourers for their hire; such proceedings depressing the industrious and depriving the settlers of their comforts. In order, therefore, to remedy these grievous complaints, and to relieve the inhabitants, who have suffered by the traffic, he feels it his duty to put a total stop to this barter in future, and to prohibit the exchange of spirits or other liquors as payment for grain, animal food, wearing apparel, or any other commodity whatsoever, to all descriptions of persons in the colony and its dependencies."

This order is in itself sufficient to indicate to what fearful lengths the "rum currency" had been carried. Naturally it would have been expected that all respectable people, the military and ex-military especially, would have joined the Governor heart and soul in his efforts to put a stop to the traffic, and induce a more healthy state of things. Such, however, was not the case; and the struggle in respect to the illicit trade continued throughout the whole period of Bligh's governorship.

Other matters embittered the relations between the Governor and the colonists, and in these Bligh was not so obviously in the right as in his attempt to put down the contraband traffic in spirits. The contest reached its climax on the arrest of John Macarthur, whose efforts to promote the growth of wool have been alluded to. That gentleman had become specially obnoxious to the Governor; and, as he was also the chief trader in the community, he was selected as a scapegoat for the sins of the rest. Matters were brought to a crisis in the following manner, though the immediate circumstances of his prosecution had no direct connection with the barter of spirits. Mr. Macarthur had been part owner of a vessel that traded to Tahiti for salt pork and other articles for the supply of the colony. While this vessel was lying in Port Jackson, he received a summons from Mr. Atkins, the Judge-Advocate—that is, Chief Justice—to appear before him to answer to a complaint on the part of the crew of his vessel, of withholding from them their wages, in consequence of which they alleged that they had been compelled to break through the port regulations by coming ashore without special order. Macarthur returned an answer in writing, explanatory of his conduct in the matter, but did not obey the summons by appearing in person. This was construed to be an act of contumacy, which some attributed to a feeling of personal resentment towards the Governor, engendered by the action of the latter against the "rum currency."

A warrant was accordingly issued for Macarthur's apprehension, and on the 25th January, 1808, he was brought before the Judge-Advocate and a military jury of six, consisting of officers of the New South Wales Corps—such being at the time the composition of the Supreme Court of the colony. Mr. Macarthur objected to the Judge-Advocate sitting on his trial, on the ground that he bore him personal ill-feeling, for which assertion it would appear that there was some foundation, especially as Atkins' adviser throughout the whole proceedings was one George Crossley, a transported attorney, who is believed to have been an enemy of Macarthur. Although the defendant's objection was sustained by the six military officers, the Judge-Advocate refused to abdicate his position, and the Governor declined to supersede him—for which, indeed, he had no authority, Atkins having been appointed by the British Government.

At this juncture, the Governor summoned the six officers to his presence to explain their conduct in supporting Macarthur's protest and refusing to sit with the Judge-Advocate, but they declined to obey. The Governor also sent several times during the next day to Major

Johnston, the Commandant, at his residence at Annandale, asking him to confer with him as to the conduct of his subordinates. That officer, however, declined to come to town, on the plea of ill-health. This was an evident subterfuge, for between 6 and 7 p.m. on the same day (the Anniversary of the foundation of the colony) he suddenly made his appearance in the Barrack Square, where, if we may believe his statement, he found everything in a state of ferment and confusion, and himself beset with the clamours of a number of the leading inhabitants, civil as well as military, calling upon him to put the Governor under arrest. He accordingly marched at the head of his regiment, with drums beating and colours flying, to Government House, and Bligh was put in close confinement in his own residence. Johnston thereupon assumed the government, his first act being to suspend the Judge-Advocate, the Commissary, the Provost-Marshal, the Chaplain, and other principal officials, and to appoint others to act in their place.

Major Johnston continued to administer the government till his Lieutenant-Colonel (Foveaux) superseded him, as the senior officer in the colony, and eventually Colonel Paterson came from Tasmania and assumed the direction of affairs. Both these officers approved Johnston's proceedings, but the latter set Bligh at liberty, after a detention of twelve months, on condition of his proceeding straight to England in a vessel which was then ready to sail. Bligh promised to do so, but on his way called at Tasmania, where the military authorities attempted to detain him; he was, however, successful in escaping their hands.

News of the affair had meanwhile reached England, and the Government, being very much concerned at the proceedings of the military, despatched Lieutenant-General Macquarie to the colony as Governor. His instructions were to reinstate Governor Bligh for twenty-four hours, to assume the government himself, and to send Johnston home under close arrest. Bligh could not be reinstated, as he had left Sydney; so Macquarie's first act was to arrest Major Johnston, who was subsequently tried by court-martial in England and sentenced to be cashiered, the leniency of the sentence being such as to call forth special remark from the Prince Regent, in a minute appended to the proceedings, distinctly stating that it was not to be drawn into a precedent. Johnston afterwards returned to the colony, and died at his estate at Annandale.

With the arrival of Governor Macquarie, the colony entered on a stage of decided progress. The final abolition of the traffic in rum was followed by a marked improvement in the morals of the population. Schools were established, and the children, who had hitherto grown up in total ignorance, were taught to read and write, and instructed in useful handicrafts. An impetus was given to exploration, and the dwellings of the settlers in the bush were much improved by the efforts of the Governor during the annual tours which he made through the colony. Churches and public buildings were erected, asylums founded, and a better tone was given to society generally by the exertions of this philanthropic Governor, ably seconded by the endeavours of his high-minded wife, who laboured to improve the condition of her sex and the children in the colony. Among the many beneficial works undertaken by Macquarie, by far the most important was the road over the Mountains, *via* Lapstone Hill and Mount Victoria, to Bathurst. After many attempts to penetrate the Coast Range, it had been at last successfully crossed, in 1813, by Blaxland, Wentworth, and Lawson, names memorable in the annals of the colony. An account of the expedition will be found in another place.

Another distinguishing feature of Governor Macquarie's policy, which was almost as beneficial as his efforts to instruct the population in religion and morality, and to open up the country, was the favour with which he treated the "emancipists"—that is, those convicts who had become free by serving out their sentences. When it is remembered that the majority of those transported had been guilty of petty offences only, or of acts which in the present day would scarcely be deemed offences at all, the Governor's determination to give every encouragement in the way of official recognition to emancipists must be strongly commended. To transport a person for a petty offence, to ostracise him for the rest of his life, and to extend the social ignominy to his children, was in the highest degree unjust; and Governor Macquarie, as a humane man, set his face against the custom. In religious matters he showed a largeness of mind in advance of public opinion, by removing, as far as lay in his power, the religious disabilities under which a large section of the colonists laboured. In 1821, after a longer term of office than has been allotted to any Governor either before or since, "L. Macquarie, Esq.," as he modestly styles himself in the inscriptions on the public buildings he erected—discarding the prestige attaching to his military rank—left the colony, to the regret of the entire population, and was succeeded by Sir Thomas Brisbane.

The new Governor trod in the steps of his predecessor. He carried on the work of exploration, and in 1823 despatched Mr. Oxley, Surveyor-General, to survey Moreton Bay, Port Curtis, and other parts of the north-eastern coast-line. Following up the information furnished by a castaway named Pamphlett, Oxley discovered a river debouching into Moreton Bay, which he named after the Governor; and a town was founded on its banks, also named Brisbane, which has become the capital of the colony of Queensland. The Murray and Murrumbidgee Rivers were discovered soon afterwards by Hovell and Hume, who had formed an exploring party under the auspices of the Governor. The immigration of free settlers was much encouraged by Sir Thomas Brisbane, the result being the arrival of numbers of young men, many possessing capital, who became squatters, and soon wrought an important change in the colony, by causing the costly Government farms to be broken up. As a consequence, the wants of the community were more cheaply and better supplied by private enterprise. Censorship of the press, which had been strictly enforced up to this time, was abolished by Governor Brisbane, by proclamation dated 15th October, 1824. Trial by jury was introduced about the same period, by which the privilege of being tried by his peers was extended to every man, the assessors to the judge before that time having been chosen exclusively from officers in the Army. Sir Francis Forbes, the first Chief Justice, was mainly instrumental in introducing this great and salutary change in the administration of the law. The first normally constituted jury sat at the November Quarter Sessions of 1824. An Act had also been passed by the Imperial Parliament, in 1823, which conferred another most important privilege on the colony. It was provided that the Governor should nominate a Legislative Council of seven members, by whose advice he was to be guided. Previous to the appointment of this Council, the Governor had been virtually absolute in power, the only check upon him being the public opinion of the colonists, and the authority of the British Government as represented by the Secretary of State for the Colonies. This Council of Seven was really the nucleus around which have gathered our present Constitution and the liberties we now possess. It was the first step—in which, says the proverb, all the difficulty consists; and yet it was only after much agitation that even this initial effort was allowed to be made.

The next Governor was Major-General Ralph Darling, who, finding the colony in the state of progress above described, by a series of blunders nearly succeeded in destroying the beneficial result of the efforts of his predecessors. Arriving in Sydney in 1825, he soon became involved in very serious disputes with the colonists and the press. In order to meet the criticisms of the latter, a number of Acts were passed by the Council, which had the effect of stifling obnoxious comments for the time. One good result which sprang indirectly from these arbitrary Acts was the enlargement, in 1828, of the Legislative Council from seven to fifteen members. The Bushranging Act was passed by this Council to put down a prevalent nuisance—the gangs of escaped prisoners who infested the principal roads and robbed all-comers without distinction.

The work of exploration made some progress in Governor Darling's time, the famous journeys of Captain Charles Sturt having been undertaken with his sanction. Other explorers were Allan Cunningham, Hume, and George Macleay, son of Alexander Macleay, the Colonial Secretary of that day.

It was strongly suspected at this time that the French had an idea of forming settlements in Australia. French ships constantly appeared off the coast, ostensibly fitted out for the purpose of making geographical discoveries, but really, it was believed, to found a colony in any Australian territory which they might find unoccupied. To frustrate this suspected design, Darling despatched two expeditions, in 1826, to King George's Sound and to Western Port, in which neighbourhoods it was surmised the French were hovering. To show that there was some ground for these fears, chimerical as they may now appear, it will be sufficient to quote the Governor's instructions to the officers in charge of the expeditions. He says :—"Should you find the French already in occupation, you will, notwithstanding, land the troops, and signify to the Frenchmen that their continuance with any view of establishing themselves, or colonization, will be considered an unjustifiable intrusion on his Britannic Majesty's possessions." No Frenchmen, however, were found at either of the places named, and settlements were therefore promptly formed at Western Port, and at King George's Sound and Swan River, in Western Australia. When Governor Darling left the colony in 1831, much progress had been achieved, in spite of the newspaper war and his personal unpopularity; the population had reached over 51,000 for the whole of New South Wales, and the value of the total exports was £500,000.

The unpopularity of Governor Darling gave a factitious advantage to his successor, Sir Richard Bourke, even before his sterling qualities had become known. Sir Richard Bourke may be said to have been the real founder of our present free institutions, as under his rule the foundations of the Constitution we now enjoy were well and firmly laid, on the solid basis of full and equal rights to all, whatever their sect or belief and whether emancipist or originally free. Immigrants began to arrive in large numbers, under a policy of assisted immigration, which was then initiated. The first vote in aid of immigration was made by the Legislative Council at Bourke's suggestion, and the British Government doubled the amount given by the colony. Under that system the first batches of immigrants to arrive were fifty young women from an orphan school in Cork, and fifty-nine mechanics from Scotland, whom the Rev. Dr. Lang introduced for the purpose of building the Australian College.

But the great achievement of Sir Richard Bourke's administration was the establishment of religious equality, and the breaking up of the monopoly of Government aid enjoyed by one communion. For his services in the cause of liberty, in this and other instances, a movement was set on foot after his departure—which took place in 1837, twelve months after the passing of the Church Act—to erect a statue of him in Sydney. Mr. Westmacott was commissioned to design a figure of Sir Richard in bronze, which, together with a granite pedestal, arrived in Sydney in 1842. It was erected where it now stands, at the Macquarie-street entrance to the Domain, opposite to the Public Library, and was unveiled on the 11th April, 1842. A general holiday was proclaimed on the occasion, and the assemblage was the most numerous which had up to that time gathered, for any purpose, in the metropolis. The succeeding Governor, Sir George Gipps, delivered a speech, laudatory of his predecessor, in whose steps he said he was resolved to tread. This was the first statue ever set up in Australia. It was no more than a fitting tribute to the virtues of the Governor, and serves even now as a reminder of the new order of things which he introduced.

The famous expeditions of Sir Thomas Mitchell, who had succeeded Oxley as Surveyor-General, were undertaken during Bourke's tenure of office. The first was to the north, as far as Liverpool Plains; in the second, the country between the Bogan and the Macquarie was surveyed; and in the third, the course of the Darling was traced, from its source to its junction with the Murray. In the fourth, Mitchell discovered the rich lands of Victoria, which so enraptured him that he named the country Australia Felix.

The administration of Sir George Gipps was marked by the abolition of transportation. The system of assigning convicts as servants to the settlers had ceased in 1838, and transportation itself was abolished by an Order in Council in 1840, though an attempt was made to revive it nine years later. For many years previous to its abolition, the system of transportation was viewed with great disfavour by the colonists, and a powerful league was formed as early as 1830 to bring about its cessation. During the fifty-three years when New South Wales was open to receive British prisoners, the number of convicts who landed in Sydney was about 82,250, of whom 70,040 were males and 12,210 females. At the census of March, 1841, there were in the colony 19,397 persons, 15,760 males and 3,637 females, originally bond, but free by servitude or emancipation; and 26,977 persons, 23,844 males and 3,133 females, whose period of servitude had not expired. It would therefore appear that out of the total number of convicts sent to the colony, 46,374 remained at the abolition of the system of transportation, while 35,876 had either been removed by death or had left the settlement.

The great event of Governor Gipps' time was undoubtedly the introduction of a new Constitution, by the establishment of a Legislative Council composed of thirty-six members, twelve nominated by the Crown, and the remainder elected by those who were placed on the electoral roll, a small property qualification being required. The new Council met on the 1st August, 1843.

A great commercial crisis followed soon after the introduction of the new Constitution, and was the cause of serious and far-spread distress. An account of the causes which led up to this period of acute depression, and of the remedial measures, such as the Insolvency Act and the Lottery Bill, adopted to enable the colony to weather the storm, will be found in the chapter dealing with "Industrial History."

The first agitation for the formation of the Port Phillip District into a separate colony took place in 1844, towards the close of Governor Gipps' administration, and the claims of the trans-Murray residents to govern themselves were ably advocated by Dr. Lang, one of the six members returned by the district since known as the colony of Victoria. The entire population of what is now New South Wales, Victoria, and Queensland did not, at that period, exceed 150,000, of which the

Port Phillip District contributed only 30,000. Their distance from the seat of Government nevertheless justified the demand of the Victorians for separation, which was conceded, to their great permanent benefit, in 1851, seven years after the first agitation, and when the population of Victoria numbered 77,345. On the 1st December, 1859, New South Wales was again dismembered, losing its northern province, which was constituted a separate colony under the name of Queensland.

Sir George Gipps was succeeded as Governor by Sir Charles Augustus Fitzroy, during whose tenure of office occurred several of the most important events in the history of Australia. These, in the order of their happening, were the final abolition of transportation in 1849 ; the separation of Victoria in 1851 ; the discovery of gold in the same year; and the establishment of Responsible Government in 1855–6. The abolition of transportation was not accomplished without a severe struggle with the pro-assignment party, the details of which will be found in their proper place, under the head of "Industrial History."

The discovery of gold, in 1851, was by far the most important incident which had yet occurred in the annals of the country. An account of that remarkable event, together with its industrial and commercial results, will be found in its proper place, but a few remarks are here called for as to the historical bearing of the great discovery. For many years prior to 1851 it was known that small quantities of gold had been found in the Bathurst district; and a colonist offered, during the administration of Sir George Gipps, to conduct the Government surveyors to a spot where he said gold existed in payable quantities, but the project was discouraged. After a few years, however, when wages were low and work was scarce, the tale of a discovery of gold was suddenly on every tongue.

In the early part of 1851 nuggets began to arrive in Sydney. They had been found in the vicinity of Bathurst, and their inspection by the public raised a wave of excitement, which affected all classes. It is not surprising that the possibility of amassing a fortune in a few months—which seemed indisputable from the presence of so many specimens of gold—should have induced hundreds of people of all ranks to abandon their employments, and set out for Bathurst. Nor could news of such a nature be confined within the colony, and before many months had elapsed the presence of gold in Australia was known all over the world. Then, from every quarter of the globe, followed a mighty rush of the most enterprising spirits and those physically the most capable of enduring the unknown hardships before them—a circumstance on which Australians in the future will have occasion to congratulate themselves; for the splendid physique of the early colonists, already manifested in their sons and daughters, must undoubtedly become the inheritance of succeeding generations.

The effect produced on society by this most fortunate discovery
unpleasant enough at first. Stations throughout the colony were
without hands, and all ordinary occupations were threatened with
tinction, in consequence of the general exodus to the gold-fields.
squatters even petitioned the Government asking that martial law mi
be proclaimed, and all gold-digging peremptorily prohibited, in or
that the regular industrial pursuits of the country should not be int
fered with. The Governor, however, refused to accede to this manifes
absurd request. So great a change in the circumstances of the count
as that wrought within so short a time by the gold discovery, could n
fail to affect many persons prejudicially. But after a few years, affai
resumed their normal course, and gold-mining found its level as one
the ordinary industries of the country. The great and permanent bene
which resulted from the influx of an enterprising population, the increa
of wealth, and the consequent development of many other industrie
cannot be overrated. Nothing since the introduction of wool-growing ha
tended so much to develop its resources, and to make so widely known th
great advantages which Australia offers to the overcrowded population
of the Old World, as the discovery of gold in 1851. Since that era th
country's progress has been by leaps and bounds, and Australia, which was before regarded merely as a far-off dependency of Great Britain, now takes a place amongst the nations of the world, and is in a fair way of realising the prophetic visions of future greatness which inspired its founders.

For several years before the discovery of gold there had been growing up among the colonists a strong desire for a larger measure of self-government. The position of the colony as a Crown dependency was a galling one, especially when the population became so largely increased through the outbreak of the gold fever. It was felt that the old system, which might have sufficed for the government of the people when their numbers were few, was quite unsuitable for so large a community as New South Wales had become. Hence the agitation that had already been commenced in favour of a free Constitution was continued with ever-increasing force.

In 1851, an Act was passed by the Imperial Parliament (13 and 14 Vic., No. 59), in accordance with which the dependency of Victoria was erected into a separate colony, and provision was made to confer a Constitution upon New South Wales. Accordingly, in 1852, a Select Committee of the Legislative Council was appointed to prepare a Constitution for the colony, in pursuance of the powers conferred by the Act above cited. The first result of the labours of the Committee was the despatch of a remonstrance to the Secretary of State for the Colonies, directed not so much against the old form of government, as against the amendment of the Constitution which it was proposed to introduce. Subsequently, after much correspondence, and the receipt of a despatch from the Secretary for the Colonies, Sir John Pakington, practically conceding all that the colonists demanded, a Committee of the Legislative Council was appointed to draft the new Constitution. This Committee consisted of the following gentlemen:—Messrs. Wentworth, Deas-Thomson, James Macarthur, Cowper, Martin, Macleay, Thurlow, Murray, and Dr. Douglas.

The Committee, in their report, stated that they desired to have a form of government in perfect accordance with the British Constitution, and that a conservative element ought to be constantly present in the Constitution; and for this reason they declared they did not feel inclined to hazard the experiment of an Upper House based on the general elective franchise. To provide for this Upper House the Committee gravely made the following recommendations. They proposed that an hereditary nobility should be created, leaving the Crown to decide whether or not to give the first holder of a title a seat for life, and that the aristocracy to be thus established should, in the future, elect a certain number of their order to form the higher branch of the Legislature. The question of federation was also noticed in the report:—"One of the most prominent legislative measures required by the colony, and the colonies of the Australian group generally, is the establishment at once of a General Assembly, to make laws in relation to those intercolonial questions that have arisen, or may hereafter arise, among them. The questions which would claim the exercise of such a jurisdiction appear to be (1) intercolonial tariffs and the coasting trade; (2) railways, roads, canals, and other such works running through any two of the colonies; (3) beacons and lighthouses on the coast; (4) intercolonial gold regulations; (5) postage between the said colonies; (6) a general court of appeal from the courts of such colonies; (7) a power to legislate on all other subjects which may be submitted to them by addresses from the Legislative Councils and Assemblies of the colonies, and to appropriate to any of the above-mentioned objects the necessary sums of money, to be raised by a percentage on the revenues of all the colonies interested."

This report, when it was made public, caused a good deal of commotion in the metropolis, and at a public meeting, held at the "Royal Hotel," the following energetic protest against part of the scheme was adopted:—"That this meeting views with surprise and strong feelings of opposition the scheme proposed for the political constitution of the colony, especially in respect to the establishment of an Upper House of Crown nominees, and a certain unprecedented order of colonial nobility"; and a further resolution decided that "a larger meeting should be held, in order to record a protest against a measure so repugnant to the feelings of British subjects, and fraught with so much danger to the political rights of the people." A more numerous meeting was accordingly held, the principal speakers at which were Mr. (afterwards Sir Henry) Parkes, Messrs. Robert Johnson, Montefiore, Deniehy, Mort, Piddington, Flood, and Archdeacon McEncroe.

In spite of these meetings, the Council proceeded to debate the Report as it stood. After a great deal of opposition to the retention of the "aristocratic" clause, and after the holding of more public meetings, the "Constitution Act," the basis of the rights we now enjoy, was finally passed on the 21st December, 1853. This Act established two Legislative Chambers. The first was to consist of not less than twenty-one natural-born or naturalised subjects (four-fifths of whom were to be persons not holding any office of profit under the Crown) who were to be nominated by the Governor in the name of the Queen. The first members were to hold their seats for five years, at the expiration of which period all appointments were to be made for life. The President was to be appointed by the Crown. The Legislative Assembly was to consist of fifty-four members, the qualification for the franchise being fixed as follows:—All inhabitants of full age, being native-born or naturalised subjects of the British Crown, and not having been convicted of any crime—or, if convicted, pardoned—and having paid all rates and taxes for which they were liable, were placed in the condition precedent required for either voting or being elected to the Assembly, but they were required, in addition, to be qualified in the following respects:—As the owner of a freehold estate of £100; as a householder, lodging occupier, or leaseholder for three years at £10 per annum. To these were added boarders at £40 per annum, persons receiving £100 a year salary, and pasture-license holders for one year. Ministers of religion were declared incapable of being elected to the Legislature. Subsequent alterations to the Constitution Act removed that restriction, and made universal manhood suffrage the basis of the electoral system of the colony, with the application of the principle popularly known as "one man, one vote." A full account of the parliamentary system will be found under the chapter of this work treating of "Constitution and Government."

Before the Constitution could become operative, it was necessary that the sanction of the British Parliament should be obtained, and for this purpose Wentworth (whose name has become identified with the establishment of Responsible Government) and E. Deas-Thomson were authorised by the Council to proceed to England in order to do what lay in their power to facilitate the passage of the necessary measure. Accordingly, about the middle of the year 1855, an Act was passed by the Imperial Parliament, empowering the Queen to assent to the Bill drawn up by the Council, and on the 19th December the new Constitution was formally inaugurated by Governor-General Sir William Denison, who had just succeeded Fitzroy, being sworn in afresh under a Commission from the Queen, which revoked his former credentials and appointed him "Governor-in-Chief" of New South Wales. The writs for the first Parliament were issued on the 22nd May of the following year.

With the enumeration of the events that led up to the introduction of responsible government this narrative fitly closes. All that has since taken place has been treated, as far as possible, as belonging to statistics, and will be found dealt with in various places in other chapters of this volume.

SUCCESSION OF GOVERNORS.

The succession of Governors, from the foundation of the colony to the present time, is given in the following table:—

	From	To
Captain A. Phillip, R.N.	26 Jan., 1788	10 Dec., 1792.
Major F. Grose, New South Wales Corps (Lieutenant-Governor)	11 Dec., 1792	12 Dec., 1794.
Captain W. Paterson, N.S.W. Corps (Lieutenant-Governor)	13 Dec., 1794	1 Sept., 1795.
Captain J. Hunter, R.N.	7 Sept., 1795	27 Sept., 1800.
Captain P. G. King, R.N.	28 Sept., 1800	12 Aug., 1806.
Captain W. Bligh, R.N.	13 Aug., 1806	26 Jan., 1808.
During Governor Bligh's suspension—		
Lieutenant-Colonel G. Johnston, N.S.W. Corps Lieutenant-Colonel J. Foveaux, N.S.W. Corps Colonel W. Paterson, N.S.W. Corps	26 Jan., 1808	28 Dec., 1809.
Major-General L. Macquarie	1 Jan., 1810	1 Dec., 1821.
Major-General Sir T. Brisbane, K.C.B.	1 Dec., 1821	1 Dec., 1825.
Colonel Stewart, 3rd Regiment (Acting Governor)	6 Dec., 1825	18 Dec., 1825.
Lieutenant-General Ralph Darling	19 Dec., 1825	21 Oct., 1831.
Colonel P. Lindsay, C.B., 39th Regiment, (Acting Governor)	22 Oct., 1831	2 Dec., 1831.
Major-General Sir Richard Bourke, K.C.B.	3 Dec., 1831	5 Dec., 1837.
Lieut.-Colonel K. Snodgrass, 52nd Regiment (Acting Governor)	6 Dec., 1837	23 Feb., 1838.
Sir George Gipps	24 Feb., 1838	11 July, 1846.
Lieut.-General Sir Maurice O'Connell, Commander of the Forces (Lieutenant-Governor)	12 July, 1846	2 Aug., 1846.
Sir Charles A. Fitzroy, K.C.B., K.H.	2 Aug., 1846	17 Jan., 1855.
Sir William Thomas Denison, K.C.B.	20 Jan., 1855	22 Jan., 1861.
Lieutenant-Colonel John F. Kempt, 12th Regiment (Administrator)	23 Jan., 1861	21 Mar., 1861.
The Right Honorable Sir John Young, K.C.B., G.C.M.G. Administrator	22 Mar., 1861	15 May, 1861.
Governor-in-Chief	16 May, 1861	24 Dec., 1867.
Major-General Sir Trevor Chute, K.C.B., Commander of the Forces (Administrator)	25 Dec., 1867	7 Jan., 1868.
The Right Honorable the Earl of Belmore, P.C.	8 Jan., 1868	22 Feb., 1872.
Sir Alfred Stephen, Knt., C.B. (Administrator)	23 Feb., 1872	2 June, 1872.
Sir Hercules George Robert Robinson, G.C.M.G.	3 June, 1872	19 Mar., 1879.
Sir Alfred Stephen, K.C.M.G., C.B. (Lieutenant-Governor)	20 Mar., 1879	3 Aug., 1879.
The Right Honorable Sir Augustus William Frederick Spencer Loftus, P.C., G.C.B.	4 Aug., 1879	9 Nov., 1885.
Sir Alfred Stephen, G.C.M.G., C.B. (Lieutenant-Governor)	10 Nov., 1885	11 Dec., 1885.
The Right Honorable Baron Carrington, P.C., G.C.M.G.	12 Dec., 1885	1 Nov., 1890.
Sir Alfred Stephen, G.C.M.G., C.B. (Lieutenant-Governor)	3 Nov., 1890	15 Jan., 1891.

	From	To
The Right Honorable the Earl of Jersey, P.C., G.C.M.G.	15 Jan., 1891	28 Feb.,
Sir F. M. Darley, Kt., Chief Justice (Lieutenant-Governor)	2 Mar., 1893	29 May,
The Right Honorable Sir Robert William Duff, P.C., G.C.M.G.	29 May, 1893	15 Mar., (died in o
Sir F. M. Darley, Kt., Chief Justice (Lieutenant-Governor)	16 Mar., 1895	21 Nov.,
The Right Honorable Viscount Hampden	21 Nov., 1895	(Still in

During Sir William Denison's term of office he made two visi Norfolk Island, the first extending from 17th September to October, 1857; and the second, from 16th June to 8th July, 1 During his first visit the government was administered by Co H. K. Bloomfield, Mr. J. H. Plunkett, and Mr. Charles Cowper; during the second, by Colonel J. M. Perceval, Sir William W. Bu and Mr. Charles Cowper.

LIMITS AND AREA

THE Colony of New South Wales lies almost entirely between the 29th and 36th parallels of south latitude, and between the 141st and 153rd meridians east of Greenwich. It is bounded on the east by the Pacific Ocean, to which it presents a coast-line extending over 700 miles, from Point Danger at its north-eastern extremity to Cape Howe at the south-east. From the point last mentioned, which is also the north-east limit of the colony of Victoria, it is bounded by an imaginary line, running in a north-westerly direction to the source of the Indi, a stream rising at the foot of Forest Hill, a few miles south of the Pilot Mountain, one of the most conspicuous peaks of the Australian Alps. The southern boundary of the colony follows the course of the Indi, and afterwards of the Murray, into which the first-named stream ultimately merges, as far as the 141st meridian of east longitude. The intersection of the Murray with this meridian forms a common point of the three colonies of New South Wales, Victoria, and South Australia.

On the west, the colony is separated from South Australia by the line of the 141st meridian, as far as its intersection with the 29th parallel of south latitude, at which point New South Wales, South Australia, and Queensland touch. Commencing at this point, the northern boundary of the colony follows the 29th degree of latitude, till it is crossed by the Macintyre River, one of the upper branches of the Darling, not far from the 149th meridian. Thence it follows the course of the Macintyre upward, to the junction of its tributary, the Dumaresq; leaving the Macintyre, it follows the tributary stream till it meets a spur extending from the Main Dividing Range to the junction of Tenterfield Creek and the Dumaresq. The boundary runs along this spur until it joins the main range, thence, almost parallel to the coast, it follows the Dividing Range to Wilson's Peak, where the Macpherson Range branches eastward. Following the last-named range, the northern boundary reaches the coast at Point Danger.

The area comprised within these limits is estimated at 310,700 square miles, or 198,848,000 acres, being a little over two-and-a-half times that of Great Britain and Ireland. Excluding the surface covered by rivers and lakes, the area would be 195,882,150 acres, or about 306,060 square miles.

The length of the colony, from Point Danger on the north to Cape Howe on the south, is 680 miles. From east to west, along the 29th parallel, the breadth is 760 miles, while diagonally from the south-west corner, where the Murray passes into South Australia, to Point Danger, the length reaches 850 miles.

PHYSICAL CONFIGURATION.

THE surface of New South Wales is divided naturally into three distinct zones, each widely differing in general character and physical aspect, and clearly defined by the Main Dividing Range, which traverses the country from north to south. The table-land, which forms the summit of this range, comprises one of the zones above mentioned, and marks the division between the coastal region, forming the eastern watershed, and the great plain district of the interior.

MOUNTAINS, TABLE-LAND, ETC.

The Main Dividing Range runs almost parallel to the coast, at no great distance from it. On the eastern edge of the table-land the mountains rise abruptly to a height which averages between 2,000 and 3,000 feet, while on the western side they slope gradually towards the great central plain. The geographical centre of the whole mountain system of south-eastern Australia lies in the south-eastern portion of New South Wales, close to the confines of Victoria. Here some of the peaks rise to a height of over 7,000 feet above the level of the sea. Mount Kosciusko and Mount Townsend, two of the highest peaks of the Australian Alps, attain an elevation of 7,328 feet and 7,260 feet respectively.

The central plateau, which these heights dominate, becomes subdivided into several branches, marking the watershed of three distinct river systems. The eastern watershed extends throughout the whole length of New South Wales and Queensland, and drains into the Pacific Ocean. The western watershed, embracing a portion of the three eastern colonies, is drained by the river system of the Murray and Darling into the Southern Ocean. In the southern watershed the Snowy River has its source, its upper basin being entirely in New South Wales, although its waters flow through Victoria and enter the sea near Bass' Strait.

In the south-eastern portion of the colony, which has the appearance of having been convulsed by some great physical disturbance, the width and altitude of the table-land are greatest. The mountains, however, are rugged and their slopes abrupt, as is also the case in other portions of the Dividing Range, particularly in the Blue Mountains and the eastern parts of New England. The average height of the Snowy and Muniong Ranges, which belong to the south-eastern district, reaches 5,000 feet; and the width of the plateau, in the direction of east and west, may be set down at 100 miles. The altitude of the Monaro district averages 2,000 feet above the sea-level; but as the table-land runs northward it decreases greatly in height and in width, until it narrows to a few miles only, with an elevation of scarcely 1,500 feet.

The table-land rises again at the Blue Mountains, where the principal summits attain a considerable elevation, Mount Beemarang reaching 4,100 feet. The general level of the plateau itself will be best understood when it is remembered that the Great Western Railway of the colony traverses a district in these mountains, of which the Clarence Siding, Mount Victoria, Mount Wilson, and Blackheath, are stations, situated at an elevation of over 3,000 feet. The dividing chain again decreases gradually in its spread northward of the Blue Mountains, until, as a comparatively narrow ridge, it divides the waters of the Goulburn and the Hunter, on the eastern slope, from those of the Namoi and the Castlereagh, on the western. The mass once more widens out in the Liverpool Ranges, where Mount Oxley stands conspicuous at a height of 4,500 feet, whilst still farther north Ben Lomond reaches 5,000 feet, and the table-land maintains an average altitude of 3,000 feet, giving to this district, although situated at no great distance from the tropics, the climate and aspect of much higher altitudes.

Narrow valleys and deep gorges everywhere break the continuity of the Dividing Range. Such is especially the case in the Blue Mountains, where the scenery is of striking and characteristic grandeur. The table-land everywhere presents one strange peculiarity. The level land suddenly terminates, and many hundred feet below, as far as the eye can reach, wooded valleys extend, whose undulating floors are walled in by sandstone cliffs, of height so enormous as to be without parallel elsewhere in the world. At the bottom of these valleys small rivulets and tiny streams, fed by waterfalls from the table-land, trace their way, under an ever-verdant dome of graceful tree-ferns and giant eucalypti.

The mountain scenery of this part of New South Wales produces on the traveller an entirely new impression. There are no snow-capped peaks upon which the rising and setting sun produces strange and magnificent colour effects, nor does any peculiar shape of the summits strike the imagination, as in the Alps and Pyrenees of the Old World. On the contrary, from the plains the New South Wales mountains look rather insignificant. But gazing from the edges of the high table-land into the deep valleys below, the mind is awed by the realisation of the magnificent scale on which Nature has worked in these solitudes. In many places the cliffs rise 2,000 feet perpendicularly from the valley beneath, and the hills at their feet, formed by the accumulation of debris from their sides and from the plateau above, appear as slight undulations. The valleys and sides of the gorges, wherever there is soil, are clothed with dense vegetation, and over all is the mantle of blue haze which makes the whole effect most striking, and which has given to the range visible from Sydney its appropriate name.

The main range throws off many spurs towards the sea on the eastern slope. These divide the waters of the numerous rivers which flow into the Pacific Ocean. Almost everywhere between the coast range and the sea the country is hilly and serrated, more particularly in the southern portion of the colony. In the Illawarra district, 50 miles to the south of Sydney, the mountains skirt the very edge of the coast, presenting towards the ocean a perpendicular face of cliffs nearly 1,000 feet in height. Farther north there is a wider coast-land, with greater stretches of country available for tillage and pasture.

The western slope is entirely different. Numerous ramifications of the general mountain system are thrown off, but all slope gently towards the great central plain of the interior. So gentle, indeed, is the declivity that the dividing lines of the various watersheds as they extend westward are scarcely visible, being only indicated by a succession of low ridges and isolated elevations.

In the extreme west of the colony, verging on South Australia, another mountain system exists, forming the western edge of an immense depression, through which the largest rivers of the Australian Continent hold their devious course. The Barrier and the Grey Ranges are part of this system. They consist of low hills, hardly rising to the dignity of mountains, and culminating in a few solitary peaks, such as Mount Arrowsmith and Mount Lyell, which attain an elevation of only 2,000 feet above sea-level.

Traces have been found of the existence at some earlier period of a range of primary rocks, extending from Orange to Cobar and Wilcannia, and forming the watershed between the Lachlan and part of the basin of the Darling. The range no longer exists as a landmark, for owing to denudation it has almost entirely disappeared.

The whole mountain system of New South Wales lies below the limit of perpetual snow. On the south-eastern slopes of the Snowy Ranges, however, and on the summits of the high peaks of the Australian Alps, snow sometimes lingers throughout the year.

LAKES OF THE MOUNTAIN REGION.

On the summit of the Main Dividing Range, and within a few miles of the inland towns of Goulburn, Queanbeyan, and Braidwood, two of the principal lakes of the colony are situated. Lake George is 16 miles in length and 6 miles in width, draining a basin whose area is about 490 square miles. It is situated at an elevation of 2,200 feet above the sea, and the scenery around it is very beautiful. This lake exhibits the phenomenon of a large drainage area without a visible outlet, for though it receives many small water-courses, no stream leaves it. Lake Bathurst, a few miles east of Lake George, is another depression on the summit of the Dividing Range, and covers in ordinary seasons an area of about 15 square miles. It is similar in character to Lake George, having no outlet to the sea. Both lakes, in periods of great drought, shrink considerably in area; but Lake George in most seasons is a fine sheet of water, and now that the railway to Cooma skirts its shores, the attractiveness of its scenery makes it a favourite resort of tourists.

THE COASTAL REGION—RIVERS.

The main range already described, traversing the country from north to south, gives rise to numerous rivers flowing into the South Pacific. Compared with the western rivers of the colony, those of the eastern slope appear insignificant enough; but contrasted with the principal rivers of western Europe, their relative size and importance are at once manifest.

In the extreme north of the colony, the Tweed and Brunswick Rivers flow through a rich country of semi-tropical aspect. Their courses are short, and bar-entrances render them navigable only for small craft.

A few miles south of the Brunswick, the Richmond descends from the heights of the Macpherson Range, on the slope of Mount Lindsay, one of the highest peaks of the northern table-land. The river has three branches, and is navigable on the main arm as far as Casino, 62 miles, and on Wilson's Creek to Lismore, 60 miles from the sea. The Richmond drains an area of about 2,400 square miles of country, rugged in its upper basin and heavily timbered, and in its lower course flowing through rich alluvial land, where the produce of semi-tropical climes grows luxuriantly.

Immediately south of the last-named stream is the Clarence—the largest river on the eastern watershed. It takes its rise in a spur of the Main Dividing Range, and runs in a south-easterly direction for 240 miles, carrying a considerable body of water through one of the richest districts of the colony, and emptying itself into the Pacific at Shoal Bay. The upper part of its basin is very rugged, so much so that its principal tributaries, the Mitchell, Nymboi, Timbarra, and Orara Rivers, rising in the New England table-land, between Armidale and Tenterfield, all flow in an opposite direction to the course of the main stream, generally trending to the north-east, and even, in the case of the Orara and the Nymboi, to the north-west. The Lower Clarence is a magnificent stream, averaging half-a-mile in width, from its mouth upwards, for nearly 50 miles, and it is navigable for 67 miles, as far as Copmanhurst. Ocean-going steamers of large tonnage ascend the river as far as Grafton, 42 miles from the sea. The area of country drained by the Clarence is over 8,000 square miles, or nearly half as large again as the basin of the Thames, whose course, although about as long as that of the Clarence, is navigable for only 60 miles.

Two short rivers, the Bellinger and the Nambucca, both navigable for some distance by small craft, enter the Pacific between the Clarence and Trial Bay.

Into Trial Bay, the Macleay, one of the principal rivers of the coast, discharges, after a course of 200 miles from its source near Ben Lomond.

With its principal feeders, the Guyra, the Apsley, and the Chandler, the Macleay drains an area of 4,800 square miles of country, the upper part of which, especially that portion through which the Apsley flows, is extremely rugged and precipitous. Series of waterfalls, some of which have a perpendicular descent of over 200 feet, mark the course of this stream, as it runs through narrow gorges whose sides rise in places to a height of about 2,000 feet. In its lower course the valley widens very considerably into magnificent alluvial plains, fast becoming the home of a numerous and thriving population. The Macleay is navigable for more than 30 miles, as far as the town of Greenhills, a few miles above Kempsey. The country through which it flows is for the most part thickly timbered.

The Hastings is the next stream met with, emptying itself into the sea at Port Macquarie. The country which it drains is rich, undulating, and densely wooded, and the area within its watershed is 1,400 square miles. Its chief arm is formed by the Wilson and Maria Rivers, on the left bank, the latter joining the main stream a few miles above Port Macquarie.

The Manning rises in the Main Dividing Range, and flows almost due east through a prosperous district, rapidly becoming settled. The valley through which it flows is densely wooded, and the agricultural land on both sides of the river is unsurpassed for fertility. The Manning has a length of 100 miles, and, like most of the rivers of the seaboard, its course lies through undulating country, broken in the upper portion, but widening out as it nears the sea. Its chief tributary is the Barrington, on the right bank; on the left, it receives the Barnard River, the Dawson, the Lansdowne, the Nowendoc, Rowley's River, and other small streams. The Manning is navigable for ocean-going vessels as far as Wingham, about 20 miles from its mouth.

Before reaching the Hunter, several small streams are met with, amongst which may be mentioned the Wollomba and Maclean, falling into Wallis Lake; the Myall, which empties into Myall Lake; and the Karuah, which reaches the ocean at Port Stephens.

The Hunter is one of the chief rivers of the colony, and has its source in the Liverpool Range. It flows first in a southerly direction until its confluence with the Goulburn; thence it takes an easterly course, and reaches the sea at Port Hunter, on the shores of which is situated the city of Newcastle. The Hunter receives numerous tributaries. The chief of these, in addition to the Goulburn, already mentioned, are the Wollombi, the Paterson, and the Williams. With its tributaries, the Hunter drains a country extending over 11,000 square miles—an area more than twice as large as the basin of the Thames. The river is navigable for ocean-going vessels as far as Morpeth, 34 miles from the sea; whilst the Paterson and the Williams are both navigable, the one for a distance of 18 miles, and the other for 20 miles. The upper courses of the main river and its branches are through hilly, if not mountainous districts; but its lower course is mainly through rich, sandy, alluvial flats. Through its lower course, the river drains the largest and most important coal-field in Australia, whose emporium is Newcastle, the second city of the colony in shipping and commerce. The length of the Hunter is over 200 miles.

Though less important than the Hunter, from a commercial point of view, the Hawkesbury, which reaches the sea at Broken Bay, is none the less one of the finest rivers of the eastern seaboard. It is formed by the united waters of many streams, each of considerable local importance. Its chief tributaries come from the table-land or gorges of the Blue Mountains, but the principal branch of the river itself rises in the main range, further south. The range forming the watershed between the Hawkesbury and the streams flowing eastward, leaves the main range near Lake Bathurst, runs north-easterly, and terminates at the sea near Coalcliff.

Under the name of the Wollondilly, the Hawkesbury has its source not many miles from Goulburn. Flowing past that town, it proceeds in a northerly direction until it receives the waters of the Cox River, which come from the Blue Mountains, after passing through wild gorges, wherein may be found some of the most magnificent scenery in Australia. From the junction of the Cox River the stream is known as the Warragamba, which name it retains until its junction with the Nepean. This river rises in the coast range overlooking Wollongong, and together with its tributary streams, the Cataract and Cordeaux, forms the source of the water-works from which Sydney now draws its supply. Though smaller than the Warragamba, the Nepean gives its name to the united waters of the two streams. After receiving the Nepean, the river flows along the foot of the Blue Mountains, through a rich valley highly cultivated. From the Blue Mountains it is augmented by the waters of two streams, the Grose and the Colo, and from the junction of the latter the river is called the Hawkesbury. Still running northward, it is joined by the Macdonald, an important stream, navigable for some distance above its confluence with the Hawkesbury. The Macdonald comes from the north, and joins the river on the left bank. After turning to the east, the Hawkesbury holds its course through broken country, the scenery of which has been pronounced equal to any other river scenery in the world, and finally reaches the sea at Broken Bay. Its course extends over 330 miles, and the drainage area may be set down as 8,000 square miles. Navigation is possible as far as Windsor, 70 miles from the mouth, and a little dredging would enable sea-going vessels to reach this town.

In the neighbourhood of Sydney, some small streams fall into Botany Bay. Two of these, the Woronora and George's River, have their sources on the eastern slope of the ranges in which the Nepean, Cordeaux, and Cataract rise, and after rapid courses unite their waters before falling into the bay.

Generally speaking, the rivers south of Sydney are of less importance than those to the north, as the width of the coastal strip narrows considerably. The Shoalhaven, nevertheless, merits more than p notice. Rising in the coastal range and following the direction coast, it flows northerly through deep gullies, marked by magni scenery peculiarly Australian; then turning sharply to the east, it the alluvial plains, which are counted amongst the richest and mos ductive in the country. The Shoalhaven is 260 miles in length, navigable only for a few miles, and drains a district 3,300 miles in Farther south, in the narrow belt between the ranges and the sea, the Clyde, Moruya, Tuross, and Bega Rivers. They all pass th rich, undulating, agricultural country, and each has an average l of 60 to 70 miles. The Towamba River, at the extreme south o colony, empties itself into the Pacific at Twofold Bay.

The physical aspect of the eastern rivers is much the same, upper course being amidst broken and mountainous districts, and lower waters flowing through undulating country with rich alluvial along their banks, for the most part highly cultivated. Where un vated, the country is densely covered with timber, some of which at a magnificent growth, yielding the finest hardwood, and, in the n cedar and pine.

Though belonging to another river system, the upper basin of Snowy River is situated in New South Wales. This river receives snow-fed streams rising on the southern slopes of the Monaro Ra its principal tributaries being the Bombala and the Eucumbene. Snowy River and its tributaries water a considerable portion of highest table-land of the colony, between the mountain ranges of w are found large tracts of arable land, where the produce of colder cli may be grown to perfection. After leaving New South Wales, Snowy has a rapid and tortuous course, and finally enters the sea betw Cape Howe and Bass' Strait, in the colony of Victoria. The are its watershed in New South Wales is about 2,800 square miles.

HARBOURS AND PORTS.

With a coast so extensive as that of New South Wales, it would natural to expect many harbours and bays affording outlets for the duce of the country, and such is the case. Besides harbours of commer importance, there are others which afford shelter for vessels in stres weather, and a refuge in time of danger. Fortunately, however, h bours of refuge are not often required. The coast of the colony is sin larly free from cyclones, hurricanes, and like visitations. Gales certainly not unknown, and casualties are not infrequently recorded; the coast is very safe, and in many cases disasters are to be attributed causes which ordinary prudence could have averted.

Inside Cape Byron, in the north of the colony, the bay of the sa name offers shelter, in all but north-east weather, to vessels trading Queensland. A large pier has been constructed, by means of which t produce of the neighbouring districts of the Brunswick and Tweed m be shipped when an entrance to these rivers is impracticable.

At Shoal Bay, the entrance to the Clarence, the anchorage is safe and commodious, and when the works designed for improving the river entrance are completed, it promises to be one of the best ports on the coast.

Trial Bay, at the mouth of the Macleay, affords ample shelter and safe anchorage. The Government have erected a large prison on the hill overlooking the Bay, and are now utilising the prisoners' labour in constructing a breakwater, with the view of making Trial Bay not only a harbour of refuge, but a shipping port. When this design is accomplished, there is every reason to suppose that it will become one of the most frequented places on the coast, as the resources of the Macleay District are great and are rapidly developing.

Port Macquarie, at the mouth of the Hastings, and the harbour at Forster, near Cape Hawke, afford good anchorage. Port Stephens, a little farther south, offers at all times the most safe and commodious harbour desirable. As a natural port it is hardly inferior to Port Jackson, and the scenery of its shores is very beautiful. At present Port Stephens is little used, owing to its proximity to Newcastle and to the sparseness of the population in its immediate district.

Twenty miles farther south is Port Hunter, at the mouth of the river of that name. When first used, the harbour was inconvenient and somewhat dangerous; but this has been altered entirely by the breakwaters and training-walls which have been constructed. Newcastle harbour is now safe and roomy, with shipping facilities equal, if not superior, to those found in any other Australian port. Magnificent wharves line its shores, provided with hydraulic and steam cranes of the most modern type. The length of wharf frontage is more than two miles, the trade is large and increasing, and the city ranks third amongst Australasian seaports. The importance of Newcastle is mainly due to the existence of immense coal deposits in its neighbourhood, which supply not only all the Australian colonies, but the China seas, the Pacific slopes of the United States, and the countries bordering on the Spanish main. Latterly, too, large shipments of wool have been made direct to English ports, Newcastle having direct communication by railway with the northern districts of the colony.

A few miles farther south is Lake Macquarie, in the centre of the coal-field of the Newcastle district, and covering an area of 44 square miles. The great drawback to the lake as a shipping port has been the shallowness of its entrance; but extensive dykes and training-walls have been commenced, which have already increased the draught of water in the channel, and with some further improvements Lake Macquarie will become an important shipping place.

Broken Bay, 15 miles north of Port Jackson, forms the mouth of the River Hawkesbury. It has a bold entrance, and on Barranjoey, the southern headland, is erected a fine lighthouse. The bay has three branches, Brisbane Water being the northern, the Hawkesbury mouth the centre, and Pittwater the southern arm. The first-named opens out into a series of lakes, and the town of Gosford, standing at the head of one of them—the Broadwater—is the centre of an imp district. The scenery at and around Broken Bay is characteris Australian, and in natural beauty rivals even Sydney Harbour. of Broken Bay the coast-line is a succession of high cliffs and beaches.

The entrance to Port Jackson lies between perpendicular cliffs of stone several hundred feet high, and only 74 chains, or nearly one apart. Sydney Harbour has been too often described to requ lengthy reference here. It holds the first place amongst the ha of the world for convenience of entrance, depth of water, and n shipping facilities. Its natural beauties charm all who visit its s and in the quiet waters of its numerous bays and coves the of the world might securely rest. The area of water surface harbour proper is 15 square miles, and the shore-line is 165 mil circuit. At the South Head is erected a splendid lighthouse, with an electric arc light, the power of which is scarcely exceede any coast. On the shores of Port Jackson stands Sydney, the c of New South Wales and the mother city of the Australias. The and its suburbs occupy 141 square miles, and have within boundaries about 410,000 people.

Botany Bay, the first port entered by Captain Cook, the discover this territory, lies a few miles south of Sydney. It covers an area square miles, and receives the waters of several small rivers. The has very little trade, by reason of its proximity to Sydney, but frequented by craft in search of shelter during stress of weather.

Wollongong, Kiama, and Ulladulla are small harbours which have snatched, as it were, from the sea, and are important shipping plac

About 80 miles to the south of Sydney the coast is broken b important inlet called Jervis Bay. Its entrance is 2 miles wide, on its bosom safe anchorage may be found in any part. It is surrou by rich agricultural and mineral country, as yet unexploited. Na has been so bountiful to the country as a whole that particular distr undoubtedly rich, must remain for a while undeveloped, and p which would in older countries be prized for their convenience capacity, here remain unused, save as refuges in stormy weather.

Bateman's Bay, at the entrance to the Clyde, is an inlet of s importance, and coastal steamers also load produce at the mouths of Moruya, Tuross, and Bega Rivers.

Twofold Bay is a magnificent sheet of water, near the southern li of the colony. Formerly it was the seat of a large whaling trade, whic now, however, all but extinct. It is well sheltered, and a fine jetty affo ample shipping facilities. Its trade is chiefly with the neighbour colonies, in produce and live stock, the bay being the nearest outlet the sea-coast for the rich district of Monaro. A railway is planned connect the port with the table-land and the metropolis, and Twof Bay promises to become a considerable shipping place in the near futu On its shores is situated the town of Eden.

Besides the ports and harbours, properly so called, which have been above enumerated, there are several lakes, or arms of the sea, which will, with the development of the resources of the country, become ports of shipment. From Cape Hawke to Port Stephens a chain of lakes extends, communicating with the latter through the Myall River, and covering a large area. The most extensive are Wallis Lake, Myall Lake, and the Broadwater. The country round about is richly timbered, but its resources are still undeveloped. Between Lake Macquarie and Broken Bay is Tuggerah Lake, also an extensive sheet of water. South of Wollongong is Lake Illawarra, of considerable area, but shallow, and towards the south of the colony are Coila and Tuross Lakes, into which the Tuross River discharges.

ISLANDS.

No islands of any note belong geographically to New South Wales. The Broughton Islands, lying a few miles northward of the Heads of Port Stephens, are the largest in extent. Solitary Island, situated near the northern part of the coast, between the Bellinger and Clarence Rivers, and Montagu Island, 18 miles south-east of the Moruya River estuary, have been selected as the sites for lighthouses, but are not otherwise important. Norfolk Island, having an area of 8,607 acres, has been recently annexed to New South Wales; and Lord Howe Island, 3,220 acres in extent, and lying some 360 miles off the coast, in the latitude of Port Macquarie, also belongs politically to the colony.

WESTERN WATERSHED.

The western watershed of the colony is in physical features and geographical character the antithesis of the eastern. Instead of a narrow strip of country shut in by the sea and mountains, intersected by numerous short rivers with a rapid flow, the western watershed forms a vast basin through which the quiet waters of a few great rivers have their long though uncertain courses. The rivers of the western region all belong to the fluvial system of the Murray, which carries to the Southern Ocean, through the colony of South Australia, the drainage of a watershed immense in extent, embracing the northern portion of Victoria, and the western and larger part of New South Wales, and reaching almost to the centre of Queensland.

The Murray, or Hume, the southern branch of this vast river system, rises in the Snowy Mountains, from which its three principal sources, the Hume, the Tooma, and the Indi descend. The first two of these streams rise on the northern and western slopes of Mount Kosciusko; the Indi, which is really the main river, has a longer course, rising in a gully near the Pilot Mountain, at an elevation of 5,000 feet above the sea. From the confluence of these rivers the Murray rapidly descends towards the plains below Albury, where it is only 490 feet above sea-level, and has still a course of 1,439 miles to run. From Albury really be called the Upper Darling, and this appellation would be geographically accurate. The variety of names, by which not only the Darling, but many other Australian rivers are known, is due to the fact that they were discovered in sections, the identity of which was not established until years afterwards, and the sectional names have survived.

The Darling receives, in its upper course, many tributaries, which drain the southern portion of Queensland, but these rivers only flow for a short part of their courses in New South Wales. Chief among them are the Mooni, Narran, Bokhara, Culgoa, Warrego, and Paroo. The principal affluents of the Darling within the boundaries of New South Wales are on the left bank. The Gwydir, Namoi, Castlereagh, Macquarie, and Bogan are the most important. These streams are all of considerable length and similar in character; their upper valleys are on the tablelands, and their lower courses lie through alluvial plains and good pastoral country. The Darling is navigable, in times of freshets, as far as the township of Walgett, 1,758 miles from its confluence with the Murray; thence to the sea the distance is 587 miles, making a total length of navigable water from Walgett to the sea of 2,345 miles, and it therefore ranks high amongst the rivers of the world, as estimated by navigable length. Unfortunately, however, its upper course is open only during part of the year.

If the fluvial system of the Murray and Darling and their principal tributaries be considered in the light of the facilities it affords for water carriage, its value will appear not inconsiderable. The Darling River may be made available for navigation for 1,758 miles, from Wentworth to Walgett; the Murrumbidgee and Lachlan combined have 900 miles; and the Murray, from Ournie gold-field to the point where it enters the territory of South Australia, has a length of 1,120 miles. If to this be added the navigable length of the Wakool and Edward, the total distance of river which could be navigated reaches nearly 4,200 miles in the western district alone—a length more than 50 per cent. greater than that of the railways of the colony.

Here and there along the course of the western rivers are found lakes, sometimes of considerable dimensions. These lakes are in reality shallow depressions, receiving water from the overflow of the rivers in times of flood, and in return feeding them when the floods have subsided. Lake Urana is the most important in the Murray and Murrumbidgee basin, and Lakes Cowal, Cudgellico, and Waljeers, in that of the Lachlan. Along the Darling are Lakes Poopelloe and Gunyulka on the left bank, and Laidley's Ponds and Lakes Pammaroo, Tandou, and Cawndilla on the right, near Menindie. On the South Australian frontier are Lake Victoria, formed by the overflow of the Murray, and others of less importance. The area of these lakes is undefined, as they vary in size according to the rainfall, sometimes covering vast extents of country, and at other times being reduced to the proportions of mere waterholes, whilst in seasons of great drought they are absolutely dry.

CLIMATE.

IT is accepted as an ascertained fact that the temperature of lands in the southern hemisphere is lower than that of countries situated in corresponding latitudes north of the equator. To this general law New South Wales is no exception. The researches of the Government Astronomer of the colony conclusively confirm this, and show, from the records of temperature extending over many years, that the climate of New South Wales is one of the most temperate and uniform anywhere experienced. Just as the country is divided naturally into three distinct geographical regions, so it is separated into the same climatic divisions, each of which has its characteristic features.

The coastal region extends from 28° to 37° south latitude, and if the temperature accorded with that of similar latitudes in the northern hemisphere, Casino and Grafton would resemble the country bordering on the Gulf of Suez, in the Red Sea; Delhi, in India; Ningpo, in China; and New Orleans, in the United States. Such, however, is not the case. Casino has a mean temperature of 67·8°, only 2·0° more than that of Messina, in Sicily, which lies more than 9° further from the equator. Eden, which is situated at the extreme south of the colony, in latitude 37°, has a mean temperature of 60·3°, which is practically the same as that of Nice and Rome—places respectively 466 and 339 miles further removed from the equator. Not only is the climate of the coastal region milder in regard to average temperature than the corresponding latitudes in the northern hemisphere, but the range is not so great. This is a very important factor in estimating the healthiness of a country.

As regards Sydney, situated as it is midway between the extreme points of the colony, in latitude 33° 51′ south, the same truth is apparent. Its mean temperature is 62·9°, and corresponds with that of Barcelona, the great maritime city of Spain, and of Toulon in France, the former being in latitude 41° 22′, and the latter, in 43° 7′ N. At Sydney, the mean summer temperature is slightly under 71°, and that of winter 54°. The range is thus 17° Fahrenheit, while the mean yearly average for a period of 37 years was 62·9°. At Naples, where the mean temperature for the year is about the same as at Sydney, the summer temperature reaches a mean of 74·4°, and the mean of winter is 47·6°, with a range of 27°. Thus the summer is warmer and the winter much colder than at Sydney. The greatest temp[illegible] experienced in Sydney was in 1896, when 108·5° in the shade was registered; and the lowest winter was 35·9°, giving a range of 72·6°. At Naples the range has been as great as 81°, the winter minimum falling sometimes below the freezing point.

Taking the coast generally, the difference between the mean summer and mean winter temperature may be set down as averaging not more than 24°—a range so small as to be but rarely found elsewhere. The famed resorts on the Mediterranean sea-board bear no comparison with the Pacific slope of New South Wales either for natural salubrity or for the comparative mildness of the summer and winter, while the epidemics and pestilences which have devastated those regions of ancient civilisation have never made their appearance on these shores.

Passing from the coast to the table-land, a distinct climatic region is entered. On the high southern plateau, at an elevation of 4,640 feet, stands the town of Kiandra, having a mean summer temperature of 57·1°, and a winter temperature of 34·2°, corresponding with that of Dunfermline, in Scotland, in latitude 56° 5′ N., while Kiandra is in 35° 52′ S. Cooma, in the centre of the Monaro plains, at an elevation of 2,637 feet above sea-level, enjoys a summer as mild as either London or Paris, while its winters are far less severe. On the New England table-land, the climate of Armidale and other towns may be considered as nearly perfect as can be found. The yearly average temperature is barely 56·5°, while the mean summer temperature only reaches 67·7°, and the winter temperature falls to 44·4°, a range approximating closely to that of the famous health resorts in the south of France.

The climatic conditions of the western districts of the colony are entirely different from those of the other two regions, and have been often cited as disagreeable. Compared with the equable temperature of the coastal district or the table-land, there may appear some justification for such a reputation, but only by way of comparison. The climate of the great plains, in spite of the heat of part of the summer, is very healthy, and an inspection of the death-rates, both of children and grown persons, which are given elsewhere, amply bears out this view. The town of Bourke may be taken as an example. Seated in the midst of the great plain of the interior, it illustrates peculiarly well the defects, as well as the excellences, of the climate of the whole region. Bourke has exactly the same latitude as Cairo, yet its summer temperature is 1·5° less than that of the Egyptian city. New Orleans also lies on the same parallel, but the American city is 4° hotter in summer. As regards winter temperature, Bourke leaves little to be desired. The mean winter reading of the thermometer is 54·7°, and accompanied as this is by clear skies and an absence of snow, the season is both refreshing and enjoyable. The great heat experienced on occasional days in summer, when the thermometer reads considerably over 100° in the shade, is not accompanied by that moisture in the air which at the sea-coast would make a less degree of heat almost unbearable.

New South Wales falls naturally into three great meteorological divisions, viz., the coastal, embracing an area of 38,200 square miles; the table-lands, covering an area of 84,900 square miles; and the western district, with an area of 187,600 square miles. The last-named might, from its size and variable rainfall, be split into two districts with the 146° of east longitude as an arbitrary division. The coastal district has an average rainfall of 42·34 inches. In this district there are several stations close to the ocean which are subject to exceptional and varying rainfall. Amongst these may be mentioned Port Macquarie and the Clarence Heads, the first having a mean annual fall of 64·50, and the latter of 57·57 inches; while at Newcastle and Sydney the respective figures are 49·09 and 50·05 inches; and at Eden, almost the southern extremity of the colony, the average fall is only 36·34 inches. On the table-lands the rainfall averages 34·28 inches; there is, however, a small area at the southern portion of the table-lands where the high average of 63·77 inches is experienced. West of the table-lands the amount of the fall decreases as the distance from the Pacific increases, and declines from about 24·59 inches at the foot of the western slope of the Dividing Range to 14·93 inches in the Trans-Darling country. For the whole area of the Western Division the average does not exceed 20·73 inches. The mean rainfall of the colony for the last twenty-five years was about 25 inches, but this figure can hardly be taken as conveying any meaning, except perhaps that it shows the greater part of the colony to be favoured with but slight rainfall.

The following table shows the average rainfall in some of the principal stations, which are arranged in the order of their latitude, in each of the great divisions:—

Station.	Least distance from the East Coast in miles.	Mean annual Rainfall in inches.	Station.	Least distance from the East Coast in miles.	Mean annual Rainfall in inches.
Coastal District—Area, 38,200 square miles.					
Casino	28	46·43	Windsor	30	33·41
Lismore	13	59·76	Emu	36	33·62
Clarence Heads	0	57·57	Parramatta	16	38·99
Grafton	22	39·77	South Head	0	48·28
Port Macquarie	0	64·50	Sydney	5	50·05
Taree	10	51·54	Liverpool	20	40·34
Scone	78	25·11	Picton	21	30·40
Muswellbrook	68	23·97	Bulli	0	52·63
Singleton	40	31·79	Wollongong	0	43·40
Jerry's Plains	53	25·93	Nowra	6	40·70
Morpeth	15	47·93	Cape St. George	0	56·82
West Maitland	18	35·86	Moruya Heads	0	38·68
Port Stephens	0	58·10	Bodalla	7	38·51
Newcastle	1	49·09	Bega	8	33·72
Pitt Town	26	37·85	Eden	0	36·34

Station.	Least distance from the East Coast in miles.	Mean annual Rainfall in inches.	Station.	Least distance from the East Coast in miles.	Mean annual Rainfall in inches.
Table-lands—Area, 84,900 square miles.					
Tenterfield	80	34·73	Armidale	81	33·12
Inverell	124	32·23	Eversleigh	78	33·47
Glen Innes	90	35·72	Walcha	83	31·92
Bundarra	113	31·27	Goonoo Goonoo	110	27·29
Quirindi	115	29·92	Young	140	28·16
Murrurundi	94	33·38	Mittagong	27	40·87
Cassilis	120	25·23	Moss Vale	31	40·52
Mudgee	121	27·48	Murrumburrah	126	27·75
Orange	124	39·56	Crookwell	76	34·78
Bathurst	96	24·62	Goulburn	54	26·72
Forbes	176	21·69	Yass	92	26·03
Kurrajong	35	53·64	Lake George	56	30·06
Mount Victoria	61	38·26	Queanbeyan	60	24·17
Katoomba	58	67·24	Kyamba	134	32·40
Carcoar	111	32·08	Kiandra	88	63·77
Springwood	42	44·40	Cooma	52	19·92
Woodford	46	53·56	Bombala	37	24·90
Cowra	126	29·01			
Western District, East of 146° East Longitude—Area, 87,800 square miles.					
Moree	204	25·28	Cannonbar	272	18·80
Warialda	162	29·78	Dubbo	177	23·64
Bingara	153	32·93	Condobolin	227	20·47
Brewarrina	348	18·55	Marsdens	187	20·73
Walgett	286	20·21	Wagga Wagga	161	23·44
Narrabri	193	27·53	Urana	213	18·48
Gunnedah	156	27·49	Albury	175	29·24
Coonabarabran	185	32·25			
Western Plains, West of 146° East Longitude—Area, 99,800 square miles.					
Milparinka	605	9·78	Wentworth	478	12·40
Bourke	386	16·75	Hay	309	15·54
Wilcannia	473	11·72	Euston	422	13·11
Cobar	345	16·80	Deniliquin	287	17·23
Mount Hope	296	18·52	Moama	290	17·46

It is fortunate for the country that dryness is one of its characteristics; otherwise, instead of being the abode of health, the interior of the colony would, with abundant rains, have become an impenetrable jungle, the lurking-place of those malarial fevers which devastate so many fair regions of the Old World and America. New South Wales may, therefore, be compared favourably with any part of the world; and, taking into consideration the comparatively low latitudes in which it is situated, it offers a most remarkable variety of temperate climates. From Kiandra, on the highest part of the Great Dividing Range, to Bourke, on the great interior plain, the climate may be compared with that of the region of Europe extending from Edinburgh to Messina, but more generally resembling that of southern France and Italy. It may therefore be regarded as peculiarly fitted for the habitation of people of European race, embracing, as it does, within its limits, the climatic conditions under which the most advanced races of the world have prospered. The following tables, showing the average meteorological conditions of the places given in the preceding table, fairly represent the whole colony :—

Station.	South latitude.	East longitude.	Altitude.	Mean.				Highest reading of thermometer in shade.	Lowest reading of thermometer in shade.
				Yearly temperature in shade.	Summer temperature in shade.	Winter temperature in shade.	Daily range of thermometer in shade.		
Coastal District.									
	° ′	° ′	feet.	°	°	°	°	°	°
Casino	28·50	153·00	82	67·8	77·0	57·0	25·3	116·4	24·6
Lismore	28·50	153·21	52	69·7	78·1	59·8	21·0	108·2	28·2
Clarence Heads	29·28	153·21	122	69·0	76·0	60·6	15·6	104·8	39·9
Grafton	29·43	152·56	40	68·5	77·1	58·1	26·0	118·0	20·9
Port Macquarie	31·25	152·54	49	64·2	72·1	55·4	16·8	97·6	30·4
Taree	31·58	152·29	30*	65·6	74·8	55·1	20·2	112·6	24·0
Scone	32·04	150·53	680	62·2	74·4	49·3	22·0	114·2	22·2
Muswellbrook	32·17	150·53	475	64·5	76·7	51·6	25·2	117·6	20·0
Singleton	32·34	151·09	135	65·0	76·4	53·3	19·2	109·2	27·0
Jerry's Plains	32·35	150·55	150*	66·5	76·6	54·6	22·0	106·9	30·2
Morpeth	32·46	151·37	20	62·7	72·9	51·9	20·6	102·7	26·0
West Maitland	32·47	151·35	40	64·1	74·7	52·8	20·0	109·9	24·0
Port Stephens	32·49	152·09	30*	64·2	72·0	55·5	19·5	104·2	30·6
Newcastle	32·55	151·50	34	64·6	72·4	55·6	16·3	120·0	31·3
Pitt Town	33·34	150·53	40*	64·1	74·5	52·5	20·2	107·7	27·2
Windsor	33·36	150·49	58	64·5	74·6	52·9	26·1	113·9	21·5
Emu	33·46	150·40	87	62·8	73·4	51·0	17·7	107·6	26·8
Parramatta	33·49	151·02	49	62·0	70·5	52·3	20·8	104·2	20·9
Sydney	33·51	151·13	146	62·9	70·7	54·0	13·6	108·5	35·9
Liverpool	33·56	150·57	50	59·8	70·8	48·2	20·5	106·0	22·0
Picton	34·10	150·40	549	59·4	69·5	48·1	22·5	103·2	19·7
Bulli	34·18	150·58	54	63·0	69·1	55·8	18·7	99·7	34·6
Wollongong	34·25	150·56	54	62·7	69·9	54·8	17·2	106·9	31·9
Nowra	34·55	150·38	30	62·9	70·3	54·4	21·9	107·0	31·6
Cape St. George	35·12	150·45	175	61·8	69·2	53·9	14·6	105·2	25·5
Moruya Heads	35·53	150·06	50	61·5	68·5	53·5	18·5	104·8	31·1
Bodalla	36·04	149·59	40	59·8	68·4	49·8	25·1	109·3	18·6
Bega	36·38	149·53	50*	60·3	69·3	50·2	23·9	115·6	16·6
Eden	37·00	149·59	107	60·3	67·9	52·0	13·9	106·0	29·3
Table-lands.									
Tenterfield	29·05	152·04	2,827	59·1	69·6	47·2	25·0	107·1	12·0
Inverell	29·48	151·10	1,953	60·4	73·5	46·3	23·5	108·6	13·4
Glen Innes	29·48	151·44	3,518	58·4	69·2	46·1	26·1	107·3	19·1
Bundarra	30·14	151·10	2,000*	59·9	69·4	48·0	23·9	96·5	17·5
Armidale	30·32	151·38	3,333	56·5	67·7	44·4	24·7	105·2	13·9

* Approximate heights.

Station.	South latitude.	East longitude.	Altitude.	Mean.				Highest reading of thermometer in shade.	Lowest reading of thermometer in shade.
				Yearly temperature in shade.	Summer temperature in shade.	Winter temperature in shade.	Daily range of thermometer in shade.		
Table-lands—*continued*.									
	° ′	° ′	feet.	°	°	°	°	°	°
Eversleigh	30·34	151·40	3,576	55·6	67·1	42·9	24·2	102·3	13·0
Walcha	31·02	151·35	3,386	53·8	65·0	41·4	23·4	102·8	13·3
Goonoo Goonoo	31·20	150·54	1,550	61·7	74·2	48·2	26·1	105·0	19·0
Quirindi	31·32	150·41	1,278	65·6	77·4	52·1	24·1	107·6	17·0
Murrurundi	31·46	150·51	1,545	60·4	72·3	47·9	18·5	107·3	19·0
Cassilis	32·00	150·00	1,500	61·1	74·7	47·1	20·9	111·7	21·5
Mudgee	32·35	149·35	1,635	62·3	74·3	49·5	29·2	114·4	17·6
Orange	33·18	149·09	2,843	55·0	67·3	42·4	22·0	100·2	16·0
Bathurst	33·24	149·37	2,200	56·9	69·7	44·0	28·5	112·5	13·0
Forbes	33·27	148·05	787	62·9	76·8	48·9	24·4	118·4	24·0
Kurrajong	33·33	150·45	1,870	53·4	61·7	44·3	13·2	99·5	25·5
Mount Victoria	33·36	150·15	3,490	54·5	65·7	42·6	20·1	106·0	11·9
Katoomba	33·38	150·18	3,349	52·6	61·9	42·2	12·7	93·0	28·9
Carcoar	33·41	149·14	2,380	55·7	68·0	43·1	24·2	99·4	23·5
Springwood	33·43	150·34	1,216	61·2	70·6	51·3	17·0	104·3	32·9
Woodford	33·44	150·24	2,191	57·6	66·1	47·9	...	93·4	34·4
Cowra	33·54	148·45	987	63·2	77·4	48·7	22·2	110·0	21·6
Young	34·18	148·21	1,416	61·4	73·7	49·1	28·5	113·4	20·9
Mittagong	34·27	150·30	2,069	56·4	67·0	45·3	18·0	104·6	21·6
Moss Vale	34·32	150·23	2,205	55·9	66·4	44·5	17·0	103·7	18·9
Murrumburrah	34·32	148·23	1,268	62·4	74·3	49·9	25·2	104·1	24·0
Crookwell	34·27	149·30	2,000*	52·4	64·4	40·2	24·0	98·8	12·1
Goulburn	34·45	149·45	2,129	56·6	67·9	44·3	25·7	109·0	13·0
Yass	34·52	148·56	1,657	59·0	70·8	46·9	20·2	100·0	22·5
Lake George	35·12	149·25	2,267	56·8	68·0	44·0	20·5	101·0	21·8
Queanbeyan	35·20	149·15	1,899	57·1	70·0	43·6	23·2	109·4	20·1
Kyamba	35·29	147·44	750	59·0	73·0	45·4	33·6	116·0	16·0
Kiandra	35·52	148·32	4,640	45·8	57·1	34·2	25·8	102·3	†
Cooma	36·12	149·09	2,637	54·0	65·5	41·7	28·5	107·1	12·2
Bombala	36·52	149·10	3,000	55·3	66·1	43·6	26·9	104·1	17·1
Western District, East of 146° East Longitude.									
Moree	29·29	149·53	1,000*	69·0	80·6	55·7	26·7	117·3	18·0
Warialda	29·35	150·37	1,106	63·2	75·8	49·7	27·2	117·7	16·2
Bingara	29·56	150·37	1,200*	63·8	76·3	50·3	26·6	116·6	19·5
Brewarrina	29·58	146·54	430*	68·4	83·1	52·8	27·7	117·8	24·8
Walgett	30·02	148·10	522	68·4	82·1	53·8	25·3	118·4	28·7
Narrabri	30·20	149·46	697	67·0	81·1	52·3	28·1	118·9	18·4
Gunnedah	31·01	150·15	874	66·4	79·8	52·3	26·8	120·6	16·7
Coonabarabran	31·16	149·18	2,056	60·2	73·0	47·1	32·7	111·5	15·9
Cannonbar	31·22	147·23	520	68·1	81·0	54·2	27·7	118·9	27·7
Dubbo	32·18	148·35	863	63·1	76·4	49·2	25·8	112·9	17·0
Condobolin	33·12	147·14	700*	65·2	78·8	51·1	26·1	111·3	20·5
Marsdens	33·52	147·38	700*	65·6	79·6	51·0	24·0	113·8	22·0
Wagga Wagga	35·07	147·27	615	60·7	74·5	46·9	28·1	113·4	18·4
Urana	35·20	146·20	400	62·5	76·0	48·8	23·6	116·5	20·6
Albury	36·06	147·00	531	60·5	73·9	47·1	28·2	117·3	20·2

* Approximate heights. † Kiandra—Lowest, 20·0 below zero.

Station.	South latitude.	East longitude.	Altitude.	Mean. Yearly temperature in shade.	Mean. Summer temperature in shade.	Mean. Winter temperature in shade.	Mean. Daily range of thermometer in shade.	Highest reading of thermometer in shade.	Lowest reading of thermometer in shade.
Western District, West of 146° East Longitude.									
	° ′	° ′	feet.	°	°	°	°	°	°
Milparinka	29·45	141·52	1,000*	68·3	82·7	53·6	28·1	119·8	25·3
Bourke	30·03	145·58	347	69·7	83·6	54·7	27·2	127·0	28·0
Wilcannia	31·31	143·23	246	66·4	79·6	52·8	28·2	116·3	25·5
Cobar	31·32	145·50	803	66·4	80·1	51·9	29·5	118·7	25·0
Mount Hope	32·56	145·55	600*	65·3	79·1	51·3	24·0	116·0	30·6
Wentworth	34·08	141·58	144	64·4	77·1	51·6	26·4	119·0	25·0
Hay	34·30	144·56	305	63·4	75·5	50·6	28·3	117·3	21·1
Euston	34·32	142·51	188*	64·0	76·4	51·1	33·4	124·5	17·1
Deniliquin	35·32	145·02	320	61·5	74·1	48·5	30·7	121·1	18·0
Moama	36·05	144·50	320	62·3	75·6	48·1	28·6	117·0	24·0

* Approximate heights.

The following table shows the average monthly meteorological conditions of Sydney during the thirty-seven years ended 1895 :—

Month.	Atmospheric pressure. Average reading of standard barometer at 9 a.m., corrected to 32° Fahrenheit and to mean sea-level.	Atmospheric pressure. Average hourly reading of self-registering electric barograph, corrected to 32° Fahrenheit, but not to sea-level.	Temperature. Mean standard (in shade).	Temperature. Average reading of maximum thermometer (in shade).	Temperature. Average reading of minimum thermometer (in shade).	Temperature. Mean of sea-water (3 feet below surface).	Rainfall. Average monthly.	Rainfall. Greatest monthly.	Rainfall. Least monthly.	Rainfall. Average number of rainy days.
	in.	in.	deg. Fah.	deg. Fah.	deg. Fah.	deg. Fah.	in.	in.	in.	days.
January	29·969	29·771	71·5	78·3	64·8	71·1	3·744	10·49	0·42	14
February	29·999	29·806	70·9	77·0	64·7	71·2	5·515	18·56	0·40	14
March	30·091	29·897	69·3	75·4	63·1	70·4	5·491	18·70	0·42	15
April	30·140	29·946	64·5	70·8	58·2	68·5	5·848	24·49	0·06	14
May	30·133	29·935	58·4	64·9	51·9	64·4	5·108	20·87	0·21	16
June	30·114	29·915	54·3	60·6	48·2	60·0	5·361	16·30	0·54	12
July	30·144	29·945	52·3	59·1	45·7	56·9	4·286	11·95	0·12	12
August	30·128	29·930	55·0	62·5	47·6	58·9	2·850	10·75	0·04	11
September	30·074	29·877	58·7	66·2	51·1	60·3	3·218	14·05	0·08	12
October	30·029	29·833	63·4	71·0	55·8	62·7	2·878	8·65	0·21	13
November	30·006	29·812	66·5	73·9	59·4	65·8	3·155	9·88	0·20	13
December	29·939	29·746	69·8	77·1	62·7	68·5	2·600	7·80	0·45	13
Yearly averages	30·063	29·868	62·9	69·7	56·1	64·9	50·054	Extreme 24·49	Extreme 0·04	159

GEOLOGICAL FORMATION.

THE geology of the colony has been ably treated by various learned scientists, and this work has been added to by the late Mr. C. S. Wilkinson, Government Geologist, and by Mr. E. F. Pittman, his successor in that office. To the Rev. W. B. Clarke we are indebted for the first systematic classification of the various sedimentary formations found in New South Wales. The original classification, however, has been somewhat modified, and the rocks, as they are now known, are classified as follow :—

- *Cainozoic*..
  - Post Tertiary
    - Recent.
    - Pleistocene.
  - Tertiary ......
    - Pliocene.
    - Eocene.
- *Mesozoic* ...
  - Cretaceous...
    - Upper Cretaceous—Desert Sandstone.
    - Lower Cretaceous—Rolling Downs Formation.
  - Triassic ......
    - Hawkesbury Series
      - Waianamatta Shales.
      - Hawkesbury Sandstones
      - Narrabeen Shales.
- *Palæozoic*..
  - Permo-Carboniferous
    - Upper Coal Measures.
    - Middle Coal Measures.
    - Upper Marine Series.
    - Lower Coal Measures.
    - Lower Marine Series.
  - Carboniferous.
  - Devonian.
  - Upper Silurian.

PALÆOZOIC FORMATION.

This formation extends throughout almost the whole eastern portion of the colony, the rocks of the upper Silurian age principally occurring on the western watershed of the main Dividing Range, in the country where the Murrumbidgee, Lachlan, and Abercrombie Rivers rise. They appear on the eastern watershed, along part of the coast near Bateman's Bay, and, striking inland, are found in the basin of the Clyde, and the upper valley of the Shoalhaven.

The *Upper Silurian* rocks extend as far north as Mudgee, where they are overlaid by the Permo-Carboniferous strata of the Hunter Valley, and by the belt of volcanic rocks extending along the Liverpool Range. They reappear further north, in the upper valley of the Macleay River, on the east slope, and in the basin of the Namoi, on the west of the Dividing Range. The Silurian rocks consist of sandstone, slate, and limestone, and exhibit evidence of metamorphism, particularly in the country around Bathurst and Hill End. Limestone beds, of considerable extent, are scattered throughout this formation. These are chiefly composed of crinoids and corals which outcrop prominently in the Wellington District, near Molong and Gulgong, at Tuena, and also in the Murrumbidgee District. In the limestone formations are found magnificent caves, such as the Wellington, Wombeyan, Fish River or Jenolan Caves, Bungonia and Abercrombie, the fame of which has spread even beyond the confines of Australia. The caves at Yarrangobilly, in the Kiandra district, are also said to be very attractive.

The *Devonian* rocks are well seen at Mount Lambie, near Rydal, where the late Mr. C. S. Wilkinson measured a section of strata showing a thickness of not less than 10,000 feet. They also occur in the southern and western districts.

The *Carboniferous* rocks.—The coal-bearing rocks are of three distinct systems, the first of which belongs in all probability to the lower carboniferous age. Two seams, the one 5 feet and the other 7 feet in thickness, occur near the top of this system, but the coal in both cases is full of bands, and otherwise too dirty to be of any economic value.

The *Permo-Carboniferous* rocks.—The second system, known as the Permo-Carboniferous, contains many seams of workable coal, which have been developed in both New South Wales and Queensland. Productive coal measures occur in this system in three horizons in New South Wales: the first and lowest of these is the Greta (Stony Creek) series, the second the Tomago (East Maitland) series, and the last and uppermost the Newcastle series. The total thickness of this system and its associated strata at Newcastle is about 11,000 feet, containing a total thickness of about 150 feet of coal, without taking into account seams of less than 3 feet in thickness. Recent borings at Cremorne, a point on the northern margin of Sydney Harbour, as well as at Holt-Sutherland and Liverpool, confirm the anticipations of Mr. C. S. Wilkinson as to the continuous extension of at least the upper or Newcastle series of coal-seams between Newcastle on the north and Bulli on the south.

MESOZOIC FORMATION.

The *Triassic* rocks.—The third system comprises the Clarence Carboniferous basin, and is of Mesozoic age. Professor David estimates the length of that part of it which contains the principal seams to be about 65 miles from east to west, while its width is about 37 mi[illegible] north to south. The most remarkable beds in the Clarence basin are a series of massive whitish sandstones, which were considered by Mr. C. S. Wilkinson to be the equivalents of the Hawkesbury sandstones, and were named by him "The Middle Clarence Series," occupying as they do an intermediate position between the upper and lower coal-beds of the basin. None of the seams in this coal-field has as yet been proved to be of commercial value. Professor David estimates the top seam to contain 1 foot 9 inches, out of a total thickness of 5 feet 7½ inches, of coal fit for ordinary consumption, while the second and third seams have not yet been sufficiently tested to allow of a definite opinion being formed of their value. It is probable, however, that even if the seams prove to be of insufficient thickness and purity to yield coal fit for purposes of export, they may supply sufficient coal of fair quality for local requirements, especially if the coal be washed in suitable washing machines, such as Lührig's.

The Hawkesbury and Wianamatta series, which overlay the Carboniferous formation of that part of the country through which the Hawkesbury and its principal tributaries flow, belong to the Mesozoic period. It is in this formation that the wonderful gorges of the Blue Mountains, and the beautiful harbours of Port Jackson, Port Hacking, and Broken Bay, occur. The rocks consist of grey, purple, and chocolate coloured shales, and yellowish-grey sandstones, and the maximum thickness of the strata is estimated at 1,700 feet.

The Wianamatta series extends round Sydney, and covers a space in the shape of an irregular triangle, the angular points of which rest at Picton on the south, Richmond on the North, and Sydney on the east. The beds are composed of fine sedimentary deposits of argillaceous shales, and are of comparatively little thickness. They appear to have been deposited in hollows worn by denudation out of the sandstone on which they directly rest. Neither the Narrabeen shales, nor the Hawkesbury sandstones, nor the Wianamatta shales contain any remarkable seams of coal. All three formations are intersected by dykes of dolerite, which have also intruded the underlying Carboniferous formations, and where they have come in contact with the coal-seams, the latter have been converted into coke, sometimes to a thickness of 3 feet or more.

The *Cretaceous* formations occupy the north-western part of the colony extending from the Darling westward towards the north-west corner. Water-bearing strata have been reached at depths varying from 89 feet to 2,070 feet, and large quantities of water have been obtained. The existence of subterranean water throughout this extensive region has been practically demonstrated, and it remains for the settlers to avail themselves of the stores with which nature has charged her reservoirs in the ages that have long since been counted out. The steps already taken in regard to utilising the artesian water are described below.

CAINOZOIC FORMATION.

To this formation belongs the greater portion of the central and western districts of the colony. It therefore embraces the valleys of the great western rivers and their chief tributaries. The formation is, however, intersected by a broad broken belt, chiefly of Silurian rocks, extending across its centre, from the Bogan River towards the Great Barrier Range on the further side of the Darling. Large patches of Devonian formation are also met with in the same region. Making these deductions, the *Tertiary* formation covers more than one-third of the whole colony. The vast alluvial plains were formed during the Pliocene and Post-Pliocene periods. The alluvial deposits are of variable thickness, sometimes shallow ; but in the great plains, between the main rivers which intersect the country, the deposits are of very great depth.

IGNEOUS AND METAMORPHIC FORMATION.

The area occupied by this formation comprises one-eighth of the colony—the principal rocks belonging to the series consisting of varieties of granite, quartz, porphyry and felstone, diorite, basalt, and serpentine. The granite formation occurs for the most part in the northern and southern masses of the Great Dividing Range, but is found outcropping throughout the Silurian deposits, which cover so large a part of the centre of the colony. Diorite and basalt occur principally in the country between the Macleay and Manning Rivers, and on both slopes of the Liverpool Range, between the upper waters of the Namoi and Macleay. Serpentine is found scattered in different parts of the colony, chiefly at Gundagai, Bingara, Lucknow, Nundle, Yugilbah on the Clarence River, and Port Macquarie. The granites, quartz, porphyries and felstones have been recognised as belonging to the Palæozoic age, whilst the volcanic rocks, basalts, and others are chiefly contemporaneous with the tertiary series. At Kiama there is an immense development of interbedded basalt lavas and tuffs in the Permo-Carboniferous rocks.

ARTESIAN WATER.

Before actual boring operations proved that the belief was well founded, it had long been scientifically demonstrated that there was every probability of water being obtained in the Cretaceous formation which underlies the whole of the north-west portion of the colony—a region favoured with only a sparse rainfall ; and from an examination which has lately been made of this formation occurring in the western and north-western portions of the colony, it is considered probable that the artesian water-bearing basin will be found to extend much further southwards than it was previously supposed to do. It may yet be found to extend approximately along the course of the lower Darling, and possibly below the Tertiary rocks of the north-western portion of Victoria, and part of South Aust[illegible]

It was not until 1879 that artesian boring was attempted in New South Wales. In that year operations were begun at Kallara, a station lying between Bourke and Wilcannia. The supply was tapped at a depth of 140 feet, and the effluent water rose to a height of 26 feet. In 1884 the Department of Mines put down its first bore in search of water, a small supply of which was reached at 89 feet. Since then much work has been done, both by the Government and by private enterprise. Recently an important discovery was made by the Government Geologist of the colony, namely, that artesian water is obtainable in other than Cretaceous rocks. This is borne out by palæontological evidence, and some of the most successful bores, such as those at Coonamble, Moree, Gil Gil (Moree to Boggabilla), and Euroka (Walgett to Coonamble) have pierced rocks of Triassic age, and corresponding to the Ipswich coal-measures.

At the close of 1896 there were 53 completed Government bores, while 15 were in progress, and contracts had been let for others. Of those completed, there were 34 flowing, yielding a supply of approximately 22,000,000 gallons per diem, and 14 from which a supply of 500,000 gallons per diem can be pumped; but in the remaining 5 bores the search for water suitable for drinking purposes has been unsuccessful. The deepest bore sunk in the colony is that at Dolgelly, on the road from Moree to Boggabilla, which is now down 3,152 feet, and is still in progress, yielding a flow of 600,000 gallons per diem. The next in depth is the Gil Gil bore, on the same road, being 3,093 feet deep, with a flow of 700,000 gallons per diem. The largest flow has been obtained at the Euroka bore, on the road from Walgett to Coonamble, which yields approximately 4,000,000 gallons per diem.

The water from the Government bores, over and above that required for travelling stock and domestic use, is being used for irrigation purposes, and much has already been accomplished in this direction. At the Pera bore, 8 miles from Bourke, on the Wanaaring Road, an area of 57 acres has been reserved for an experimental farm. The remainder of the land has been cut up into 20-acre blocks, a number of which have been let under the homestead selection provisions of the Crown Lands Act of 1895. Good results have attended the work of irrigation at this place, as well as at other bores, especially those on the Bourke to Barringun Road. Further reference to this subject will be found in the chapter on "Agricultural Production."

There are, in addition to the Government bores, 106 completed private bores, which yield an aggregate supply of 24,000,000 gallons per diem.

FAUNA.

MAMMALS.

AT the present time, mammals are represented in Australia by the Monotremes, the Marsupials, a dog, and many rats and bats, as well as by the marine aquatic animals—whales, seals, and the dugong.

The Monotremes, which are confined to Australia, Tasmania, and New Guinea, comprise the duck-billed platypus (*Ornithorhynchus anatinus*) and the native porcupines (*Echidna* and *Proechidna*). The platypus—the "mallangong" and "tambrit" of the aboriginals—inhabits Australia and Tasmania, and is one of the most interesting animals known. The male is much larger than the female, and may be distinguished by the horny spur on the hind foot being of very large size. The total length of the male is 24 inches, while the female seldom exceeds 19 inches. In colour, the platypus is of a deep brown above, and of a greyish or yellowish white below, the fur being close and velvety. The muzzle is produced into a broad, flattened beak, which is covered during life with a delicate and sensitive skin; the tail is well developed, broad and flattened; and the feet are modified into swimming organs, the five toes being extensively webbed; while the teeth, which are unlike those of any other existing mammal, are shed early in life, their place being taken by a series of horny plates. As a mammal, the platypus is chiefly interesting because of the fact that it lays eggs. These are white in appearance; usually two in number, although three and even four are sometimes laid at one time; and in texture they are similar to the eggs produced by reptiles. When hatched, the naked and helpless young are nourished on their mother's milk, as in the case of all mammals. The nest of the platypus is formed at the end of a burrow, which is reached by two openings—one above and the other below the surface of the water.

The Echidnas are also egg-laying, but differ from the platypus in that the females carry their two eggs in a pouch, where they are hatched by the warmth of the body. The common echidna (*E. aculeata*) is characterised by having the fur thickly mingled with spines, which sometimes conceal the hair beneath. The muzzle is produced into a long cylindrical beak, which during no period is known to possess teeth; it is admirably adapted to protect and assist the worm-like extensile tongue. The feet are stout, unwebbed, and furnished with five powerful claws. The tail is short and conical. [illegible] described, but modern zoologists are inclined to consider them as geographical varieties. Regarded thus, the echidna ranges from south-east New Guinea, throughout Australia, to Tasmania. Those echidnas which are generically named *Proechidna* are distinguished by possessing only three toes on each foot, and by having a much curved beak of great length. Two species are known, both of which are confined to New Guinea.

The marsupials, to which class belong the great majority of Australian mammals, are distinguished by the young being produced in an extremely imperfect state of development, and nurtured frequently in an abdominal pouch for a lengthy period. In bush districts it is a common belief that the young are produced on the teat; this, however, is quite erroneous, for they are born in the usual manner and afterwards applied to the teat by the mother. Australia is the great home of the marsupials, but they also occur in Tasmania and New Guinea, and have overflown into neighbouring islands. In America marsupials are also found, but there they are represented by a single family—the *Didelphyidæ*. The habits and conditions assumed by the marsupials are very varied. They are divided into seven families, namely, the *Macropodidæ*, *Phalangeridæ*, and *Phascolomyidæ*, constituting the sub-order of Diprotodonts, so named from the fact that the animals included possess only two front teeth in the lower jaw; and the *Peramelidæ*, *Dasyuridæ*, *Notoryctidæ*, and *Didelphyidæ*, constituting the sub-order of Polyprotodonts, distinguished by having six or more such teeth.

1. *Macropodidæ.*—This family includes the kangaroos, wallabys, tree kangaroos, and rat kangaroos. The kangaroos are so well known that they do not require more than a passing notice. They vary in size from the great grey kangaroo (*Macropus giganteus*), as large as a man, to the little musk kangaroo (*Hypsiprymnodon moschatus*), which can easily be concealed in the pocket. Their hind limbs are very long, and progression is chiefly effected by hopping, the long tail meanwhile acting as a balancer. The tree kangaroos of Queensland and New Guinea are among the most notable of the family, climbing tall trees, even to the most slender branches. Less frequently observed upon the ground than the others, their limbs are more equal in length.

2. *Phalangeridæ.*—Under this name are included the Australian opossums, the flying opossums, the flying mouse (one of the smallest marsupials), and the clumsy native bear—all tolerably well-known forms.

3. *Phascolomyidæ.*—The wombats, of which there are three species, are heavily-made, short-limbed animals. They excavate huge burrows in the ground, and feed upon grass and other herbage. They inhabit Australia and Tasmania.

4. *Peramelidæ.*—The bandicoots, found in Australia and New Guinea, are assigned to three genera—*Peragale*, *Perameles*, and *Chœropus*. Members of the first-named are known as rabbit bandicoots, or beilbys; while the second genus includes the true bandicoots, whose form and

habits are sufficiently well known. The pig-footed bandicoot (*Chœropus castanotis*) is generically separated on account of the unique and peculiar structure of the four feet, which have a striking resemblance to those of the pig.

5. *Dasyuridæ.*—The animals included in this family are the marsupial carnivora, so to speak, and are familiar as native cats (*Dasyurus*) and pouched mice (*Phascologale* and *Sminthopsis*). These forms occur in Tasmania, New Guinea, and adjacent islands, as well as in Australia. The most formidable of the group are the Tasmanian tiger or wolf (*Thylacinus cynocephalus*) and the Tasmanian devil (*Sarcophilus ursinus*), which are confined at the present day to the colony indicated.

6. *Notoryctidæ.*—The recent finding of a mole-like animal in Australia is one of the most interesting discoveries of the day. The marsupial mole is in no way connected with the European mole, but nevertheless has acquired many similar habits—affording a valuable lesson in parallelism in development. It is known only from central South Australia.

7. *Didelphyidæ.*—These are the true opossums, and being confined to America, need not be further mentioned here.

Dogs and seals form the carnivora of Australia. The dog family (*Canidæ*) is represented by the dingo, or native dog (*Canis dingo*), called by the aboriginals "worregal"; dingo being only the aboriginal name for the domestic dog introduced by Europeans. The native dog is found in all parts of the Australian mainland, and will inbreed with the domestic dog, crosses being common throughout the settlements. It is questionable whether the dingo is indigenous, or whether it has been introduced from abroad. It was undoubtedly acclimatised before the arrival of the first white settlers. The dingo does not bark, its temper is intractable, and it works great havoc among the flocks of the settlers.

The *Rodentia* finds representatives in many species of native rats, the more typical ones of which belong to the genus *Mus*, and the Jerboa-like forms to the genus *Conilurus*. The familiar water rat is known as *Hydromys chrysogaster*.

The *Chiroptera* are well in evidence, and include the flying-foxes and many insectivorous bats. The common flying-fox (*Pteropus poliocephalus*) is met with in the brush lands, but it haunts the neighbourhood of towns during the fruit season, making great depredations among the orchards and gardens.

Of seals (*Pinnipedia*), the species found off the coast of New South Wales are the Australian sea bear or eared seal (*Otaria forsteri*), and the sea leopard (*Ogmorhinus leptonyx*), the former being a sociable and the latter a solitary species.

Among other mammals belonging to New South Wales, or found contiguous to its coasts, are representatives of the orders Cetacea and Sirenia, the first comprising whales, porpoi[illegible] second, manatees and dugongs. Whales have always haunted the coasts of the colony, and formerly a brisk trade was carried on in oil and whalebone; Twofold Bay, about 208 miles south of Sydney, being the chief seat of the industry. Among the whalebone-whales which inhabit our waters may be mentioned the Southern right whale (*Balæna australis*), the pigmy whale (*Neobalæna marginata*), and the Sulphur-bottom (*Balænoptera huttoni*); while of sperm whales there are the gigantic *Physeter macrocephalus*, *Mesoplodon layardi*, and *Kogia breviceps*. The dolphin of our waters, commonly called "porpoise," is not distinguishable from the common and cosmopolitan form, *Delphinus delphis*. The order Sirenia is represented by the dugong (*Halicore dugong*), but it is now seldom seen south of Moreton Bay. Its flesh is highly valued by the natives, and its oil is a good substitute for cod-liver oil.

Besides those already mentioned, geological research has brought to light the remains of numerous extinct species of gigantic mammalia. The largest fossil marsupial, the *Diprotodon australis*, an herbivorous monster, was as large as the rhinoceros, and related to the native bear or the wombat. Its bones have been found distributed generally throughout eastern and southern Australia. Fossil remains of another large marsupial, the *Nototherium*, named by the late W. S. Macleay the *Zygomaturus*, have also been found, as well as of a member of the family of the *Phascolomyidæ*, or wombats, and of a marsupial rodent-like animal, named the *Sceparnodon*. In the bone-breccia of the Wellington Valley Caves were found the bones of gigantic kangaroos (*Macropus titan*), which have been placed in the genera *Palorchestes*, *Procoptodon*, *Protemnodon*, and *Sthenurus*; besides those of the *Thylacoleo carnifex* and the true *Thylacinus*. The Wellington Valley Caves have also yielded fossil remains of a "porcupine" (*Echidna*) and a platypus (*Ornithorhynchus*), belonging to the order Monotremata.

Reptiles and Batrachians.

First among the reptiles may be mentioned the snakes. Although there are very many species of both venemous and harmless snakes, there are only about five which are actually harmful. The deadly snakes of the colony are as follow:—

1. The black snake—*Pseudechis porphyriacus.*
2. The brown snake—*Diemenia textilis.*
3. The tiger or brown-banded snake—*Notechis scutatus.*
4. The superb or copper-headed snake—*Denisonia superba.*
5. The death adder—*Acanthophis antarctica.*

To these should be added several sea snakes not infrequently found on the coast. Nearly all of these are highly venomous.

The largest of the harmless species are true pythons, known as the diamond and carpet snakes (*Python spilotes*). Of tree snakes the commonest is *Dendrophis punctulatus.*

Lizards may be said to swarm. The goanas, of which the *Varanus varius* attains a length of 6 feet or more, are the largest kind. Other familiar forms are the blue-tongued lizards (*Tiliqua scincoides* and *T. nigro-lutea*), the Jew-lizard (*Amphibolurus barbatus*), the water lizard (*Physignathus lesueurii*), and the spiny lizard (*Egernia cunninghami*). The best-known gecko is the rock gecko (*Gymnodactylus platurus*), a harmless, though curious, little creature, much feared by those ignorant of its nature.

The tortoises are semi-aquatic, and belong to the genera *Chelodina* and *Emydura.* Although two species of crocodile frequent the rivers of Queensland, they are fortunately absent on the New South Wales side of the border.

Of Batrachians, there are no newts nor salamanders on the continent but of frogs there is an immense choice, the tree frogs (*Hyla*) and the swamp frogs (*Limnodynastes*) being the most familiar forms.

BIRDS.

Few countries can boast of a greater variety of beautiful birds than New South Wales, all the more important orders and families of the class Aves being represented in the fauna of the colony. In the Australian continent and the adjacent islands no less than 770 species of birds have been discovered, some of which are especially interesting, and among these may be mentioned the lyre-bird (*Menura superba*), the satin bower-bird (*Ptilonorhynchus violaceus*), the fawn-breasted bower-bird (*Chlamydodera cerviniventris*), and the tooth-billed bower-builder (*Scenopœus dentirostris*); the mound-building malleefowl (*Lipoa ocellata*), the mound-building brush-fowl (*Talegallus lathami*), and the collared plain-wanderer (*Pedionomus torquatus*). Many of the Australian birds, besides being beautifully plumaged, are no mean songsters, and others again are possessed of remarkable powers of mimicry and ventriloquism.

The order Accipitres is well represented in New South Wales, twenty-six out of the twenty-eight species inhabiting Australia being found in the colony. The largest of all our birds of prey is the wedge-tailed eagle (*Aquila audax*). In many parts of the colony this fine bird is included in the list of noxious animals and birds, in consequence of the destruction which it causes amongst lambs, but in the dingo and rabbit infested districts it is protected by land-owners on account of the effectual service which it renders in keeping these pests in check. Another useful bird is the black-breasted kite (*Gypoictinia melanosternon*), frequenting the inland districts. As many as thirty rabbit skulls have been found under a nest of a pair of these birds containing young. The whi[illegible] eagle (*Haliætus leucogaster*) and the white-headed osprey (*Pandion leucocephalus*) frequent the bays and inlets of our coast, while several species of hawks, eagles, harriers, kites, and a kestrel are found inland. The sub-order Striges, or nocturnal birds of prey, is represented by eight species. Chief among these are the great owl of the brushes (*Athene strenua*) and the sooty owl (*Strix tenebricosa*), found in the coastal districts.

The order Psittaci is especially numerous, and includes many beautiful species of cockatoos, parrots, parrakeets, and lorikeets. Among the larger species are the white and black cockatoos, yellow and pink crested; and the grey pink-crested gallah. The parrot family is also especially strong, some of the most notable members being the love-birds (*Melopsittacus undulatus*), the green parrot, and many kinds of lorics, all gorgeously plumaged.

The order Picariæ, which embraces swifts, kingfishers, cuckoos, etc., includes one very remarkable specimen, viz., the great kingfisher, goburra, or laughing-jackass, so called from its extraordinary mocking laugh. It is one of the most valuable of birds, being the determined enemy and persistent destroyer of small reptiles. The mopoke, or boobook owl (*Podargus strigoides*), is also a characteristic member of this order, which includes the owlet night-jar, the dollar bird, and several species of kingfishers.

The order Passeres comprises swallows, crows, rifle-birds, honey-eaters, finches, pittas, etc. This is the largest order of birds in Australia; and the finest, if not the most beautiful, family is the *Menuridæ*. New South Wales possesses a handsome species of this remarkable Australian bird, called from the shape of its tail the lyre-bird (*Menura superba*). It is to be found chiefly in the fern gullies and brush-forests of the colony. To the order Passeres belong also the crow-shrikes of the genera *Cracticus* and *Gymnorhina*, the beautifully-plumaged regent birds (*Sericulus melinus*), whip-birds (*Psophodes crepitans*), swallows, martins, diamond birds, fly-catchers, fan-tails, wedge-bills, thick-heads, robins—red-capped, red-breasted, and yellow; "superb warblers," emu-wrens, meadow pipits, bristle-birds, grass, crimson, and painted finches; pittas, ground-thrushes, bower-builders, cat-birds, rock-warblers, and honey-eaters (*Meliphagidæ*). Worthy of special notice in this large order of birds are the bower-builders. Three species of these extraordinary and interesting birds are found in the colony. The brilliantly-plumaged regent-bird (*Sericulus melinus*), which forms the most primitive bower or playing-place, frequents the dense coastal brushes of the northern rivers; the satin bower-bird (*Ptilonorhynchus violaceus*), is found in the scrubs and mountain-ranges of eastern New South Wales; and the spotted bower-bird (*Chlamydodera maculata*), inhabits the grassy plains and lightly-timbered country inland. Scattered about the entrances to the bowers of the last two species are pieces of bleached bone, land shells, bright feathers, bits of looking-glass, coins, or any bright object which the birds may pick up in the bush.

The order Columbæ is largely represented in the colony, especially in the great primæval forests of the coast districts. In the cedar brushes of the Liverpool Range white-headed fruit pigeons are very numerous; and in the brush-forests of the Clarence, the Richmond, the Macleay, and Illawarra, the top-knot and large-tailed pigeons, and the wonga-wonga (*Leucosarcia picata*), so prized for its large size and the whiteness and delicacy of its flesh, are very plentiful. The bronze-winged pigeon (*Phaps chalcoptera*), is common to almost all parts of the colony. Several species of these birds are remarkable for their beautiful plumage, their size, and the excellence of their flesh. One of the finest species, the partridge bronze-winged pigeon (*Geophaps scripta*), is found almost exclusively in the plains of the interior. Doves are also numerous, and most of the species are extremely delicate and beautiful. The little turtle-dove of the inland districts (*Geopelia cuneata*) is the prettiest specimen of this family.

The game birds found in the colony belong to the orders Gallinæ and Hemipodii. The former is represented by the wattled talegallus (*Talegallus lathami*), found in the northern coastal scrubs and contiguous mountain ranges, and the mallee-fowl (*Lipoa ocellata*), inhabiting the inland districts. Both of these birds belong to the family *Megapodiidæ*, or mound-raising birds, and deposit their eggs in a scraped-up heap of leaves, decaying vegetable matter, and sand. To this order also belong the stubble quail (*Coturnix pectoralis*), the swamp quail (*Synoicus australis*), and the king quail (*Excalfatoria lineata*), the last-named species being probably the smallest game bird in the world. The order Hemipodii, which by some authorities is included in the Gallinæ, is represented by four species of turnix, commonly known as quail, and the remarkable collared plain wanderer (*Pedionomus torquatus*).

The order Grallatores includes many genera, and to it belongs the Australian bustard, commonly known as the Plain turkey (*Eupodotis australis*), as well as the waders, such as stilts, water-crakes, ibises, dotterels, gallinules, spoon-bills, herons, bitterns, and many others.

Among water-birds, Natatores, are enormous numbers of wild-fowl of all descriptions, ducks, geese, grebes, as well as black swans. The latter is essentially an Australian bird, and may be met with in all parts of the continent. The order embraces, also, the large and very varied species of sea-birds frequenting the coast, such, for instance, as albatrosses, gulls, petrels, and cormorants.

The order Struthiones, or running birds, is represented by the emu (*Dromaius novæ-hollandiæ*), the largest bird in this part of the globe, and one, unfortunately, rapidly being exterminated.

Besides the birds mentioned above, there are others of perhaps less note, but numerous, and frequently very beautiful. They are all admirably described and depicted in the celebrated work of Mr. Gould, which occupies a high rank amongst the scientific publications of the century.

FISHES.

According to the late Rev. J. E. Tenison-Woods, S.J., no less than sixty different families of fishes, comprising 348 species, frequent the waters of New South Wales. These are enumerated in the subjoined table :—

Name of family.	No. of species.	Name of family.	No. of species.
Percidæ	50	Ophiocephalidæ	1
Squamipinnes	4	Trachypteridæ	1
Nandidæ	2	Pomacentridæ	4
Mullidæ	3	Labridæ	18
Sparidæ	14	Gadopsidæ	1
Cirrhitidæ	6	Gadidæ	4
Scorpænidæ	11	Pleuronectidæ	9
Teuthididæ	2	Siluriidæ	5
Berycidæ	3	Scopelidæ	6
Kurtidæ	2	Salmonidæ	1
Polynemidæ	2	Galaxiidæ	7
Sciænidæ	2	Scombresocidæ	6
Xiphiidæ	1	Clupeidæ	12
Trichiuridæ	1	Chirocentridæ	1
Acronuridæ	1	Symbrachidæ	1
Carangidæ	15	Murænidæ	11
Cyttidæ	1	Syngnathidæ	6
Coryphænidæ	2	Sclerodermi	21
Scombridæ	10	Gymnodontes	12
Trachinidæ	5	Carcharidæ	8
Batrachidæ	1	Lamnidæ	1
Pediculati	4	Scyllidæ	3
Cottidæ	7	Cestraciontidæ	2
Cataphracti	1	Spinacidæ	1
Gobiidæ	15	Rhinidæ	1
Blenniidæ	17	Pristiophoridæ	1
Sphyrænidæ	3	Rhinobatidæ	2
Atherinidæ	4	Trygonidæ	3
Mugilidæ	7	Torpedinidæ	1
Fistularidæ	1	Raiidæ	1

The edible fishes comprise 105 different species; amongst the best known may be mentioned :

The schnapper (*Pagrus unicolor*), the most valuable of all Australian fishes, is found along the whole extent of the coast, and is very abundant. It is a deep-water fish, found generally near rocky points or reefs running out into the sea. The schnappers "school," as it is termed, during the summer months, and are then most plentiful. The young fish, known as red bream, frequents the harbours and estuaries of the coast, but is never found in shallow water. The schnapper is caught by the hook, which it takes freely, as it will attack almost any bait. It sometimes attains a very large size, weighing as much as 30 lb. The fish cures well, and is said to be equal to the finest cod, and is in every respect superior to ling.

The nannigai is a deep-water fish, caught with the hook, and ranks high in public estimation as an edible fish. The supply is not large, as the fish is not specially sought after, being chiefly obtained by fishermen in search of schnapper. The nannigai is scientifically interesting as one of the oldest forms of bony-fishes now surviving.

The black rock-cod is considered one of the best of Australian fish, and is also a deep-water fish, never captured by the net. It grows to a great size, specimens from 35 lb. to 40 lb. being not uncommon, whilst fish weighing over 100 lb. are met with in the markets. It is found more abundantly in the warmer waters of the north of the colony, where, as a rule, it attains larger proportions than to the southward of Sydney. In the vicinity of the islands lying off the New South Wales coast—the Seal Rocks, Solitaries, Elizabeth Reef, and Lord Howe Island—the black rock-cod may be taken in almost any quantity, and of the largest size.

A fish of great size and beauty, known in Australia as the salmon, is found off the coast in prodigious quantities. It has no affinity whatever to the true salmon, and is inferior as an article of food.

The flat-head, a fine fish, of which there are several varieties, is captured both by the hook and net. It is of excellent quality, and ranks high amongst New South Wales fishes.

There are four species of whiting found in these waters. The common sand-whiting and the trumpeter-whiting are both very abundant, but the other two species are more rare. The sand-whiting is perhaps the fish most in demand in the metropolitan markets, where it is to be obtained all the year round.

The jew-fish is the largest edible fish found on the New South Wales coast, attaining sometimes a length of 5 feet. It is found at all seasons, but most frequently during summer. The teraglin is of the same family as the jew-fish, though it does not reach an equal size. The air bladder is large and of excellent quality, being of great value for the making of isinglass.

The mackerel is obtained in enormous quantities off the coast, and sometimes even in the harbours. It is a good fish when eaten fresh, but it decomposes rapidly.

The family of Mugilidæ, or mullets, is well represented in Australian waters. The sea mullet is a large fish, often attaining a length of 2 feet, and a weight of 8 lb. It is regarded by some authorities as unsurpassed in richness and delicacy of flavour by any fish in the world; and it visits these shores in countless numbers in the season when it is in the best condition. When young the fish keeps entirely to the creeks and lakes, where it increases in size very rapidly, but when full-grown it seeks the open waters.

There are four species of gar-fish found on the New South Wales coast. The Sydney gar-fish is very abundant, especially towards the end of summer, making its appearance in shoals, sometimes of enormous size. The river gar-fish is even of better quality than the last mentioned, but it is not so plentiful as formerly. The other species are seldom met with. There are numerous other varieties of fishes found in the waters of New South Wales, many of which are very valuable as articles of food, but for the most part they are neither so numerous nor so easily obtained as those referred to.

Destructive fishes are by no means rare, the shark family being largely represented, not only in the deep sea, off the coast, but even in the harbours. The shark is not, however, absolutely valueless. The fins find a ready sale in the Chinese markets; the skin also has some commercial value; while from the liver is extracted a large quantity of valuable oil, equal in every respect to cod-liver oil.

Several varieties of fishes which have long disappeared from other parts of the world are still represented in New South Wales. Amongst these is the cestracion, or Port Jackson shark, whose teeth resemble those of the fossil acrodis found in the mesozoic deposits.

During the season the Australian waters teem with herrings, the season of immigration being the last six months of the year. There are four species, but two only are of commercial importance, though a more accurate knowledge of the composition of the shoals might lead to the discovery of other valuable species. The most valuable of this family of fishes is the pilchard. The Australian pilchard in a fresh state is equal in excellence to the Atlantic pilchard, and there is every reason to suppose that it can be obtained in quantities sufficient to enable competition to be entered into with the bloater and sardine of Europe. The maray also pass northward at the same time as the pilchard, and in like prodigious numbers, but both species keep well away from the shore.

The rivers of the colony produce some most excellent specimens of fresh-water fish. The Murray, Murrumbidgee, Lachlan, and Darling are the most plentifully stocked, the Murray cod (*Oligorus Mitchelli*), being perhaps the most highly esteemed of their fishes. Another fish of the same species is the *Oligorus Macquariensis*, which is to be met with in the upper branches of the Clarence. Specimens of both these varieties of fresh-water cod have been found weighing as much as 100 lb. The silver perch, and several kinds of the Percidæ family, so highly prized for their delicacy, are plentiful in the rivers. In the Richmond River the cat-fish (*Copidoglanis Tandanus*) is very common, whilst herrings and mullet are caught in almost all the eastern rivers of the colony.

Little systematic attempt has yet been made to acclimatise European varieties of edible fishes, although success would most probably attend any efforts in this direction, every difficulty having been overcome in Victoria, New Zealand, and Tasmania. Some five or six thousand trout ova, presented by the Geelong Acclimatisation Society, have been distributed in various localities, including the Prospect Reservoir.

MOLLUSCA.

The first of local shell-fish in economic interest is the oyster. Two kinds occur on the coast of New South Wales—a large one, considered to be a form of the English oyster (*Ostrea edulis*), and popularly known as the mud oyster; and a smaller sort, the rock oyster (*O. glomerata*).

The mud oyster reaches in Sydney the northern limit of its range, and fails to attain here to the luxuriant growth which it exhibits in cooler climates. The prolific beds of Stewart's Island, New Zealand, furnish a large proportion of the supply of mud oysters for the Australian markets. This oyster prefers deep and muddy places, where it may attain a length of 8 inches. Nowhere is it now abundant, and, indeed, it seems to be approaching extinction. The blacks formerly feasted upon it, but connoisseurs of the superior race disparage it as large and coarse.

Unlike the mud oyster, the rock oyster is well suited to cultivation. In Southern Queensland, favoured alike by more congenial climate, extensive tracts of shoal and sheltered water, and appropriate legislation, the cultivation of this species has been most successful. The beds in Moreton Bay supply not only the local demand, but also the requirements of the southern capitals. Though falling short of the perfection reached by the cultivation of the Bay of Biscay and the New York coast, the management of the Queensland oyster-beds excels that of any other Australian fishery. When accurate details of the mode of breeding of the rock oyster shall have been found by exact scientific inquiry, a further impetus will be given to this flourishing industry. At present all that is known is that in its habits the Australian rock oyster differs altogether from the English and American kinds. Incidentally, it may be remarked that the English oyster cannot be consumed in May, June, July, and August, but the Pacific oyster is in season all the year round. From the chapter on "Fisheries" it will be seen that large quantities of oysters are imported into the colony every year, and it is evident, therefore, that the local market will afford ample support to the cultivators of the bays and deltas of northern New South Wales. The obstacles to success are floods and shifting sandbanks, and the depredations of boring worms and whelks; while among the advantages of this lucrative occupation are the quickness of returns and the smallness of capital required.

Quantities of spat are thrown off at various times, but especially heavy falls occur in the spring, after which the rocks between tide-marks may be literally plastered with young shells of the size of a shilling. The great majority of these perish; those surviving reach maturity in about twelve months, and probably increase in size for two or three years. When adult, their length is about 3 inches. Typically, they have sharply-waved, black-purple edges. Form and colour, ho are so altered by environment that specimens from different si have been given different names. That they are really one kind is, however, proved by taking a young purple and crumple-edged shell from a position on rocks washed by waves, and placing it on a zostera flat in calm water. Here it developes a thin, white, smooth and large shell; so that one shell may show one form at one end and another at the other, the line of junction marking the period of transference.

No shell-fish other than oysters are regularly consumed in New South Wales, the Australian inheriting and accentuating the British distaste for such small game. Occasionally, however, there are exposed for sale at the Sydney fish market the whelk (*Potamides ebeninum*) and the cockle (*Area trapezia*), the former being cooked, and the latter eaten either cooked or raw. Both the whelk and the cockle are used as bait, but neither is at all like its English namesake. Probably their use as food is restricted to the Greek and Italian element of the Sydney population. The mutton fish, or "abalone" of Californian markets (*Haliotis naevosa*), is consumed by the Chinese, who, it is said, also collect it for export; but the ordinary citizen is unacquainted with it. The "ugarie," commonly miscalled by Sydney anglers by the Maori name of "pipi" (*Donax deltoides*), is frequently used for bait, rarely for food. As an article of diet, various squid (*Sepia cultrata*, *S. mestus*, &c.) are left to the foreign and coloured of the local sea-faring population, but as bait their good qualities are better appreciated. The beaches of New South Wales are not rich in ornamental shells, but the exquisite and rare "king-cockle" (*Trigonia lamarckii*) from Sydney Harbour is a valued gem, and, as a brooch, may often be seen worn.

Of pests in this division of natural history, the local species of shipworm, the "cobra" (*Teredo saulii*), has wrought great damage amongst shipping, wharfs, and piers. It is a far larger and more destructive species than any occurring in European waters. In gardens, the common European snail, the "limacon" dear to the French epicure (*Helix aspersa*), has now obtained a firm footing, and ravages flowers and vegetables alike.

CRUSTACEA.

The crustacean fauna of New South Wales is extremely rich in species, but only about twelve kinds are used as an article of diet. Of these, six are fairly common and highly esteemed as food, and are as follow:—

Common Swimming Crab (*Neptunus pelagicus*, Linn.).—This is the commonest crab offered for sale in Sydney. It often attains a weight of 2 or 3 lb., and is always in great demand, finding a ready sale at prices varying from 3d. to 9d. each. The principal supplies are obtained in Sydney Harbour, and from Botany Bay. The shell or carapace of this species is very broad, and ornamented on the front edge with twenty-four spines. Six of these are situated between the eyes, and nine on each side, the last being much larger than the others.

Swimming Crab (*Goniosoma crucifera*, Fabr.).—This species is not common, although it may be seen exposed for sale in large numbers during some months of the year. It attains to a size slightly exceeding the preceding species. The claws are shorter, stouter, and the spines on the arms large, compressed, and tooth-like. The front edge of the shell is armed with twenty spines—six on each side and eight between the eyes. The colour is "reddish, with yellowish spots and bands, of which the middle one represents a cross."

Mangrove Crab (*Scylla serrata*, Forsk.).—This is the largest and most valuable crab obtained on our coast. Unfortunately, it is not common; still a fairly large number have been exposed for sale during the last few years. The price ranges from 1s. to 2s. 6d. each. The main supplies are obtained from Botany Bay. In this species the claws are very large; the front edge of the shell is armed with twenty-four nearly equal spines; and the back of the shell is convex and smooth. The colour of the mangrove crab when alive is olive-brown. It inhabits deep holes in the mud, and comes out at low tide to feed.

Sydney Craw-fish (*Palinurus Hügelii*, Heller).—The craw-fish, or lobster (as it is usually called), is very abundant along the whole coastline, but the chief supplies are obtained at Port Stephens. It is by far the largest and most valuable of all the crustaceans of New South Wales, often attaining to 8 or 10 lb. in weight. Between four and five thousand dozen are sold annually in the wholesale markets at prices varying from 1s. to 20s. per dozen.

A second species is often seen offered for sale—the "Southern Craw-fish" (*Palinurus Lelandii*), which is equal to the Sydney craw-fish as an article of food, although usually much smaller. It may readily be distinguished by the highly-sculptured segments of the abdomen, and by the numerous hairs surrounding the bases of the spines.

River Cray-fish (*Astacopsis serratus*, Shaw).—The cray-fish is seldom offered for sale in Sydney, but it is much used as food along the banks of the inland rivers. These crustaceans often attain to a foot or more in length, and are highly prized in the winter season, when they are in their best condition.

Common or Sand Prawn (*Penaeus canaliculatus*, Olivier).—The common prawn is obtained in large quantities during the greater part of the year, but in midwinter there is at times a falling-off in the supply, and prices rise accordingly. In addition to the demand for consumption as food, this prawn is much used as bait, and frequently fetches very high prices in times of scarcity. Large specimens often reach 8 or 9 inches in length. The principal supplies are obtained from Sydney Harbour, Botany, and Cape Hawke. The species may be recognised by the deep grooves which extend along each side of the beak or rostrum to the hinder margin of the carapace, and by the rostrum, which is armed above with ten or twelve spines and with one below.

Tiger Prawn (*Penaeus Monodon*, Fabr.).—The tiger prawn is a species which appears to frequent the coast at irregular intervals. Occasionally it is captured in abundance in Sydney Harbour and at Botany. This species may be readily identified by the numerous dark-coloured cross-bands on the body and by the rostrum or beak, which has six or eight teeth above and three or four below.

River Prawn (*Penaeus Macleayi*, Haswell).—The river prawn is not so large as the two preceding species, seldom exceeding 4 or 5 inches in length. It is, however, very abundant, and appears to be obtainable during the whole of the year. The rostrum of this species has five or six teeth above, but none below—a character which renders it easy to separate it from other forms.

FLORA.

THE surface of New South Wales presents a vegetation characterised by little variation in form and colour. The dense foliage and varieties of tints with which the Old World is familiar are alike wanting in Australia, where the dull evergreen leaves alter little with the changes of the seasons. What the flora of the country lacks in picturesqueness it, however, makes up in usefulness. The task of collecting, describing, and classifying the Australian flora has been undertaken by several eminent scientists, amongst whom are Bentham, Mueller, and Hooker. The "Flora Australiensis" of the two first named of these botanists, Hooker's "Flora of Tasmania," the "Census of Australian Plants" and the "Eucalyptographia" of Baron von Mueller, are works of standard value. In dealing, however, with the description of the varied specimens of plant life found in Australia, there remained the task of describing those species whose properties rendered them capable of application to industrial life. To Mr. J. H. Maiden, Director of the Botanic Gardens, the colony is indebted for an excellent classification of those varieties which properly belong to Australian economic botany. The number of specimens so far described in each class will be found below, and it will probably appear to many as a revelation that the country should possess resources so varied and elements of wealth so promising, and at the same time so singularly neglected :—

Classification of Plants of economic value.	No. of varieties
1. Human food and food adjuncts	212
2. Forage plants—	
a. Grasses	158
b. Exclusive of grasses, and including plants injurious to stock	92
3. Drugs................................	123
4. Gums, resins, and kinos—	
a. Gums..................	40
b. Resins	21
c. Kinos...........................	39
5. Oils—	
a. Volatile or essential ...	47
b. Expressed or fixed	10
6. Perfumes	14
7. Dyes	35
8. Tans	87
9. Timbers	630
10. Fibres	67
11. Miscellaneous	38
Total	1,61[illegible]

It does not come within the scope of this volume to deal at length with a subject so comprehensive as economic botany; it may, however, be pointed out that, beyond some of the timber trees and a very limited number of oils and tans, few of the resources of the colony disclosed in the foregoing list have received any practical application.

Forests extend over almost the whole area of the colony, excepting portions of the Monaro, the Lachlan, the Murrumbidgee districts, and the trans-Darling region, where extensive treeless plains occur, clothed with salt-bush, scrub, or varieties of natural grasses. The country covered by timber may be divided into three classes—open, brush, and scrub forests.

OPEN FORESTS.

Open forests cover the greatest portion of the surface of the colony and are found in every formation. The varieties of trees met with are chiefly species of the Eucalyptus tribe, and Melaleuca, Callistemon, and other genera of the order Myrtaceæ. The prevalence of the eucalypti, and the large extent covered by the forests, give the country a rather monotonous aspect. But the park-like appearance of the open forests, and the beauty of the many flowering shrubs, win admiration in spite of the sameness of the trees; while even the dull, greyish blue of the foliage of the gum-trees, when relieved by the yellow blossoms of the wattle, the graceful myall, or the beautiful and shapely kurrajong, is not without its attractiveness. The trees are for the most part straight and cylindrical in the trunk, and when full grown their first branch is at a considerable height from the ground. The roots of the eucalyptus lie at no great distance from the surface soil, an adaptation of nature to the peculiar climatic conditions of the country. The finest specimens of most of the timber trees, those yielding the most valuable timber, are found on ridges and hill sides, in places frequently too rough and stony for cultivation. This circumstance is in many ways fortunate for the colony. In the course of settlement, when the rich plains are denuded of their trees, and when scarcity will make timber more appreciated than it is at present, land not adapted for agricultural settlement will still be available for the cultivation of the finest trees. It would be impossible, in the limits of this volume, to enumerate all the trees which are of commercial value; but a list of the best known varieties will not be without interest.

On the river flats immense specimens of flooded gum (*E. rostrata*) and apple-trees (*Angophora subvelutina*) mark the course of the streams. The flooded gum grows to a height of 100 feet, and its wood is most useful for heavy work, and for structures liable to attack by the white ant. The apple-tree has more spread than the majority of indigenous trees, and its wood is strong, heavy, and durable. The distribution of the species is very extensive.

On the ridges and mountain sides other varieties of trees predominate. The box reaches 180 feet in height, with a thickness of 6 feet, and the timber is used chiefly for firewood, for which purpose it has no superior.

The bastard box, supposed to be a cross between the box and the grey gum, is widely distributed over the colony. The quality of the timber varies greatly, according to the place of growth; some varieties are surpassed amongst hardwoods by nothing except ironbark.

Ironbark (*E. leucoxylon* and *E. paniculata*) is a tree of moderate size, usually, when full grown, from 60 to 80 feet in height, though the white ironbark attains a height of 150 feet. The timber is heavy, and renowned for its great strength, fine specimens bearing a tensile strain nearly twice as great as the best oak. The timber is used most extensively for wharves and bridges, as also for housework. Ironbark is very widely distributed, and frequently grows to perfection on the poorest soil. The ironbark and box are slow-growing trees as compared with many other varieties of eucalyptus, such as the blue gum, the latter attaining a great height in a very few years.

The blue gum (*E. globulus*), one of the finest of the eucalyptus tribe, is only met with in portions of the southern table-land, but the blue gum (*E. goniocalyx*), also called flooded gum, grows extensively in the coastal districts. It attains a good height, and is rather thicker in the trunk than most varieties of gum-trees, sometimes reaching 7 feet in diameter. The timber is greatly in demand owing to its comparative lightness, and is easily worked, being used for all purposes to which hardwood is applied.

The spotted gum (*E. maculata*) grows in all the coast districts, and in some portions of the interior, generally where the soil is poor. This is one of the handsomest of the forest trees, and attains a height of 100 to 150 feet. The quality of the wood varies greatly, according to the habitat and the character of the soil; when good, it is considered specially adapted for ship-building.

Stringybark (*E. eugenioides*), so called from its peculiar fibrous bark, grows chiefly on the northern table-lands. It is a large tree, and its wood is of great and general utility. The bark is extensively used for roofing, and forms a very useful paper-making material.

The messmate (*E. obliqua*), also called stringybark, is one of the largest of Australian trees, being frequently met with more than 250 feet in height. It grows in the south-eastern portion of the colony. The bark is used for roofing, being similar in character to that of the tree just described; it would also form an excellent paper-making material.

The blood-wood (*E. corymbosa*) is a large tree, growing in the coastal districts of the colony. The timber is used chiefly for fencing purposes, and for railway sleepers.

The grey gum (*E. tereticornis*) grows to a height of 150 feet, and is extensively distributed over the whole of the coastal districts. It yields excellent timber, hardly inferior to ironbark. There are several varieties of this tree, some of which produce wood of remarkable beauty, and of great durability.

The tallow-wood (*E. microcorys*) is a very large tree, growing extensively in the forests north of Sydney. Its wood is more easily wrought than most of the hardwoods, and has great strength and durability, being employed largely for floors and other building purposes, and for the decking of ships.

The mountain ash, or white-top (*E. virgata*), is found both on the table-lands and in the coast districts. Its timber is in demand for coopers' work, and for rough carpentry. The tree grows to about 150 feet in height.

The turpentine tree (*Syncarpia laurifolia*) is found mainly in the district lying between the Shoalhaven and the Macleay. It grows to magnificent proportions, sometimes reaching a height of 200 feet, with a diameter of 6 feet. The timber is largely used for piling, and other work in sea-water, as it resists the attack of the teredo better than any other New South Wales timber.

BRUSH FORESTS.

The brush forests cover a considerable extent of country along the coast. The trees found in them differ entirely from those of the open forests, and there is no lack of variety either in the character of the trees or the colour of their foliage. Tall graceful fern trees, sometimes attaining a height of 60 feet, beautiful varieties of palms, cabbage trees, and Moreton Bay figs of enormous proportions, are prominent features of the brush, though these are perhaps more ornamental than useful. There are, however, found in the brush forests timber trees of the greatest value.

The red and white cedar (*Cedrela australis* and *Melia composita*) were once abundant in the northern forests, but at present few of the full-grown trees are met with except on the high ridges. The red cedar is a magnificent timber tree, often attaining a height of 150 feet, with a girth of over 30 feet. Its timber is of great value, being light, easily wrought, durable, splendidly grained, and well adapted for furniture and cabinet-making. The white cedar is a pretty tree growing to a height of 80 feet, with a diameter of 3 feet. Its timber is soft and easily worked, but is deficient in tensile strength and durability, and therefore in no great demand.

The silky oak (*Grevillea Hilliana, G. robusta*) grows to the height of about 80 feet, under favourable circumstances, and yields a wood very suitable for cabinet-making.

The tulip-wood (*Harpullia pendula*) is a tall tree with beautifully marked timber of various shades, and susceptible of a fine polish.

The ash, or pigeonberry-tree, grows to a great height, sometimes reaching 130 feet, with a diameter of 5 feet. Its timber is light and tough, and in good demand.

The colonial pine (*Araucaria Cunninghamii*) is one of the finest trees of Australia, sometimes reaching a height of 200 feet, with a trunk 4 feet thick. Its timber is extensively used, being cheaper than any imported pine; it is white in colour, and easily wrought.

Native beech (*Gmelina Leichhardtii*) is also a tree of noble proportions, reaching 150 feet in height. Its timber is greatly in demand, being superior to most native timber when exposed, as it neither shrinks nor warps. In colour the wood is white or silvery, with a fine close grain.

Besides the varieties mentioned above, there are in the brush forests many other trees, yielding timber of large size and of great value, but the abundance of timber of other descriptions more readily accessible has hitherto satisfied the local demand, and the resources of these forests have been almost entirely overlooked. The subject of the timber trees of the colony, viewed from a commercial standpoint, is treated in detail in the part of this volume dealing with forestry and fisheries.

The character of the vegetation of the brush forests alters considerably according to the latitude. The trees of the Araucaria and Flindersia tribes, as well as the principal varieties of cedar, find a home chiefly in the northern parts of the colony, while many of the trees growing in the south have no representatives in the northern forests. The soil of the brush lands is wonderfully fertile, consisting as it does of decomposed volcanic rocks, enriched by the accumulation of decayed vegetable matter, and when cleared it yields an abundant return.

SCRUB FORESTS.

The scrub forests are found in the poor soils, principally in the Lachlan and Darling districts. The chief species represented are the pine, the acacia, and the eucalyptus, but although some of the trees are of great beauty, they have little commercial value. The most uninviting portion of the colony is covered with scrub, and the mallee districts, clothed as they are with stunted timber—a variety of the eucalyptus—impress the traveller more unfavourably than would even a barren waste.

SPECIFIC GRAVITY AND STRENGTH OF TIMBERS.

The specific gravity and resistance to breaking of various New South Wales timbers, and of some of the best-known European and other varieties, are shown in the following table. With regard to the New South Wales timbers, it should be mentioned that the tests were made with picked specimens, so that the results are perhaps considerably higher than would be obtained in actual practice. The modulus of rupture is eighteen times the load which is required to break a bar 1 in. square, supported at two points 1 foot apart, and loaded in the middle between the points of support, or

$$s = \frac{3\,W\,l}{2\,bd^2}$$

when W = load applied at middle of beam between supports, b = breadth, d = depth, l = length of beam, and s = co-efficient of rapture or breaking stress per square inch :—

Timber Trees.	Specific gravity.	Resistance to breaking or modulus of rupture. =s
New South Wales—		lb. per sq. inch.
Spotted gum	·995	13,300
Grey gum	·917	13,100
Flooded gum	1·178	14,800
Red gum	·995	6,900
Woollybutt	1·022	12,700
Blackbutt	1·067	13,700
White ironbark	1·177	16,900
Grey ironbark	1·182	17,900
Red ironbark	1·224	16,300
Forest oak	1·208	15,500
Turpentine	1·109	11,700
Stringybark	1·141	13,900
Blackwood	1·129	10,300
Tallow-wood	1·233	15,260
Australian teak	1·006	14,400
Mahogany	1·201	14,500
Forest mahogany	1·156	13,800
Swamp mahogany	1·216	12,100
White beech	1·008	15,600
Mountain ash	1·065	11,500
Rosewood	1·189	10,600
Pine	·868	8,800
European and other Foreign—		
Ash	·753	13,000
Beech	·690	10,500
Birch	·711	11,700
Bullet-tree	1·046	19,000
Chestnut	·535	10,660
Ebony	1·193	27,000
Elm	·544	7,900
Fir, Red pine	·48 to ·70	8,300
,, Spruce	·48 to ·70	11,100
,, Larch	·50 to ·56	7,500
Greenheart	1·001	22,000
Kauri pine (New Zealand)	·579	11,000
Lance wood	·675 to 1·01	17,350
Lignum vitæ	·65 to 1·33	12,000
Mahogany (Honduras)	·56	11,500
,, (Spanish)	·85	7,600
Oak (British)	·69 to ·99	11,800
,, (Dantzic)	·69 to ·99	8,700
,, (American)	·99	10,600
Sycamore	·59	9,600
Teak (Indian)	·66 to ·88	15,500
Willow	·40	6,600

CONSTITUTION AND GOVERNMENT.

THE record of New South Wales as a Crown colony belongs more to history than to current statistics. It is therefore not proposed, in the following sketch, to deal with matters prior to the establishment of Responsible Government, though a brief narrative of the early history and settlement of the country will be found in the opening pages of this volume.

The present form of government was inaugurated about forty years ago, the "Act to confer a Constitution on New South Wales, and to grant a Civil List to Her Majesty," having received the Royal assent on the 16th July, 1855. This important statute was proclaimed in Sydney on the 24th November of the same year, and at once came into operation, sweeping away entirely the former system, and constituting an elective representative Chamber, thus, by the granting of equal privileges, making the colonists of New South Wales the equals of their countrymen in other parts of the Empire. The ties which bound the colony to the Empire were in no way loosened, for the Constitution Act simply conceded to the people of New South Wales the same rights which prevailed in the United Kingdom, namely, of taxing themselves, and of being governed by Ministers responsible to a Parliament elected by the people. The authority vested in the Sovereign remains the same as before, though the mode of its exercise is widely different. The Sovereign, previous to Responsible Government, exercised, through the Governor, almost despotic power. This official in times past united in himself the executive and legislative functions, and personal liberty and independence were to no small degree in his power. With the establishment of Responsible Government this state of things ceased, and the greatest measure of individual liberty is now found compatible with the full protection of public rights. The readiness with which the people of the colony adapted themselves to the forms and practice of their new government was not a little remarkable, and fully justified their assumption of its privileges.

All laws are enacted in the name of the Queen, "by and with the advice of the Legislative Council and Legislative Assembly," the Governor, as the Royal Deputy, giving the assent of the Sovereign immediately to Acts of Parliament, or, if he should think fit, reserving them for the consideration of the Sovereign. In order that the Constitution may be clearly understood, it will be well to consider, under distinct heads, the several elements of which the Government and Legislature consist.

THE GOVERNOR.

Previous to 1879 the Governor of the Colony was appointed by Letters Patent under the Great Seal; but in that year the practice was discontinued by the advice of Sir Alfred Stephen, given during the tenure of office of Sir Hercules Robinson. The change was first carried out in the appointment of Sir Augustus Loftus. The office of Governor is now constituted by permanent Letters Patent, and by a standing Commission, instead of as formerly by letters issued *pro hac vice* only. The Governor receives his appointment at present by Commission under the Royal sign manual and signet, which recites the Letters Patent of the 29th April, 1879, as well as the instructions issued (under sign manual and signet) in further declaration of the Queen's "will and pleasure." The original Letters Patent, thus recited and enforced, declare that the Governor is directed and empowered "to do and execute all things that belong to his office according to the tenor of the Letters Patent, and of such Commission as may be issued to him under our sign manual and signet, and according to such instructions as may from time to time be given to him under our sign manual and signet, or by our order in our Privy Council, or by us through one of our Principal Secretaries of State, and to such laws as are now or shall hereafter be in force in the colony." By a custom which has now long prevailed, no Governor retains his office longer than six years. Should the Governor die or become incapable during his tenure of office, or be removed before the arrival of his successor, or should he have occasion to leave the colony for any considerable period, the Government is to be administered (1) by the Lieutenant-Governor; or, if there be no Lieutenant-Governor, (2) by an Administrator to be appointed according to the provisions of the Letters Patent and Instructions. The present Lieutenant-Governor is Sir Frederick Matthew Darley, Kt., C.J., who was appointed by a Commission, dated 23rd November, 1891.

The Lieutenant-Governor, or, in his absence, the Administrator, is empowered by his Commission to execute the office of Governor during any temporary absence of the Governor from the colony; but the Governor may not be absent, except in accordance with the terms of his instructions. Without the Queen's special leave he may not leave the colony for a period exceeding one month at a time, or exceeding in the aggregate one month for every year of his service, unless on a visit to the Governor of a neighbouring colony; but, on the other hand, he may leave the colony for any period not exceeding one month without its being reckoned as a departure, if he shall have previously informed the Executive Council in writing of his intention, and appointed a deputy to act for him till his return. This deputy must, in the first instance, be the Lieutenant-Governor; but if, from any cause, his services are not available, the Governor may appoint whom he pleases as his deputy.

The Governor's functions, according to the Letters Patent, Commission, and Instructions, may be recapitulated as follow :—

The Governor is the custodian of the Great Seal, under which all Crown grants, etc., must pass.

The Governor has the appointment of his own Council—the Executive. He is also to summon that Council, and is ordinarily its President; but in his absence some other member may be nominated to preside. It is usual, however, to appoint some member of the Ministry permanent Vice-President, who presides in the absence of the Governor.

The Governor is the fountain of honour within the colony, since to him belongs the power to appoint, in the Queen's name, all Judges, Justices of the Peace, Commissioners, and other "necessary officers and Ministers"; and, by virtue of his powers as Viceroy, he may remove from the exercise of his office any official so appointed.

The Governor is also the depositary of the prerogative of mercy within the colony, having it in his power to pardon, either absolutely or conditionally, any offender convicted in New South Wales. He can also remit fines, penalties, and forfeitures due to the Crown, but he cannot pardon or remit on the condition of the offender voluntarily leaving the colony, unless the offence has been a political one only. In all capital cases until recently the final responsibility of deciding whether or not the death penalty should be carried out rested solely with the Governor, but, by a new arrangement which has been agreed to by all the Australasian colonies, such final power is now exercised by the Governor "with the advice of the Executive Council." This places the procedure of these colonies, in regard to capital cases, on similar lines to the system that has for some time past been in force in Canada. Its adoption was suggested and strongly urged by Lord Onslow, the former Governor of New Zealand; and Lord Knutsford, the Secretary of State for the Colonies in the second Salisbury Administration, ascertained the views of the various Australasian colonies upon the subject. It being found that they all accepted the proposal as an improvement upon the practice then existing, a circular despatch was sent to each colony with instructions for its adoption. The new system was first used in New South Wales towards the end of October, 1892.

The Governor is also vested with the authority of the Crown, enabling him to nominate the members of the Upper House of the Legislature, and to summon, prorogue to a future day, or dissolve "any legislative body" existing in the colony. His instructions, however, provide that in the exercise of the above powers he is to act by the advice of the Executive Council in all cases except those whose nature is such that in his opinion the public service "would sustain material prejudice were he to follow such advice," or in matters too trivial to submit to the Council, or "too urgent to admit of their advice being given"; but in all such urgent cases he must communicate to the Council as soon as practicable the measures taken by him, and his reasons for acting. It is expressly provided, however, that the Governor may, if he think fit, disregard the advice of the Executive and act in direct opposition to the declared will of his advisers, but in such cases he is required to make a full report of the whole circumstances for the information of the Secretary of State for the Colonies.

The Governor acts as Viceroy as regards giving the Royal assent to or vetoing Bills passed by the Legislature, or reserving them for the special consideration of the Sovereign. The instructions deal at large with this matter, but it is usual in practice to be guided to a large extent by the advice of the law officers of the Crown. There are eight different classes of Bills, however, to which the Governor is bound to refuse the Royal assent. They are:—

(1.) Divorce Bills (that is, private bills divorcing particular persons).
(2.) Bills making any kind of grant, gratuity, or donation to the Governor.
(3.) Bills affecting the currency.
(4.) Bills imposing differential duties, which are not in accordance with the Australian Colonies Duties Act, 1873.
(5.) Bills apparently contrary to Imperial treaty obligations.
(6.) Bills interfering with the discipline or control of Her Majesty's land or sea forces employed in the colony.
(7.) Bills of great importance, or extraordinary in their nature, whereby the Royal prerogative, or the rights and property of Her Majesty's subjects residing beyond the colony, or the trade and shipping of the United Kingdom and its dependencies, may be prejudiced.
(8.) Bills containing provisions to which the Royal assent has already been refused, or which have been once disallowed, unless they contain a clause suspending their operation until the Queen's pleasure has been signified, or unless the Governor is satisfied that there is urgent necessity for bringing any such Bill into immediate operation, in which case he is empowered to assent to the Bill on behalf of the Queen, if it is not repugnant to the law of England, or inconsistent with Imperial treaty obligations; and in every such case he is required to transmit the Bill to Her Majesty, together with his reasons for assenting to it.

The following Acts of Parliament regulate the action of the Governor in assenting to Bills on behalf of the Queen, or reserving them for the consideration of the Sovereign:—5 and 6 Vic., cap. 76, secs. 31–32; 7 and 8 Vic., cap. 74, sec. 7; and 13 and 14 Vic., cap. 59, secs. 13, 32, and 33. The effect of these enactments is to deprive any reserved Bill of all force and legality until the Queen's assent thereto has been formally communicated to the Governor; and power is given to Her Majesty to veto any Bill to which the Governor has assented on her behalf within two years after the receipt of such Bill by the Secretary of State for the Colonies, in which case the Bill is to be declared null and void by message of the Governor, and proclamation. Reserved Bills are to be laid before Her Majesty in Council, and the Queen may allow them or not within a period of two years from the day on which they were reserved by the Governor. The Queen's assent to reserved Bills may be transmitted by telegram.

By Act 7 Vic., No. 16, all Acts of Parliament which become law are required to be registered by the Registrar-General within ten days of their so becoming law.

The above is a summary of the powers and duties of the Governor, as defined by his instructions and the Letters Patent, but additional duties have been imposed upon him by the Constitution and Electoral Acts. In accordance with these enactments he must summon the Legislative Assembly; appoint the President of the Legislative Council; prorogue or dissolve Parliament; appoint his ministers *proprio motu*; also appoint, with the advice of the Executive, all public officers whose appointment is not vested in heads of departments; issue all warrants for the payment of money; issue the writs for general elections, and, in the absence of the Speaker, issue writs to fill vacancies occurring in the Assembly.

In summoning, proroguing, or dissolving Parliament, the Governor usually acts according to the advice tendered him by the Cabinet, but he is in no way bound to do so, and, as a matter of fact, he has sometimes declined to be guided by his Ministers. This, however, has never happened except in respect to granting a dissolution. As to summoning or proroguing, a difference of opinion is hardly likely to arise. The relations established between the Ministry and the representatives of the people are in accordance with the time-honoured precedents prevailing in Great Britain, which may be thus defined. The Cabinet must be chosen from—"(1) Members of the Legislature; (2) holding the same political views, and chosen from the party possessing a majority in the House of Commons; (3) carrying out a concerted policy; (4) under a common responsibility, to be signified by a collective resignation in the event of Parliamentary censure; and (5) acknowledging a common subordination to one Chief Minister."

The Imperial rule as to the circumstances under which a Government is bound to resign is as follows:—Censure, involving loss of office, rests entirely with the Lower House, or popular branch of the Legislature; hence, directly a Ministry fails to command a majority of the House of Commons, it must give place to another. Want of confidence in a Cabinet may be shown in three ways: first, by a direct vote of censure, or a specific declaration of want of confidence; second, by a vote disapproving of some act of the Government; or, third, by the rejection of some important measure introduced by the Ministry. In any of these cases Ministers must either resign, or appeal to the country if they can get the Sovereign to sanction a new election.

These rules have been virtually adopted in New South Wales, and the undoubted right of the Governor, as the depositary of the Royal prerogative, to refuse to grant a dissolution, if he think fit, has been more than once exercised. In March, 1877, Sir Hercules Robinson refused to grant a dissolution to Sir John Robertson, and in September of the same year he also declined to enable Sir Henry Parkes to go to the country. The reason alleged in each case was that the Assembly refused to make provision for the expenditure of the year. It will thus be seen that a grave responsibility is thrown upon the Governor in the exercise of the unquestioned right of granting or refusing a dissolution of Parliament, and in the cases mentioned it can hardly be doubted that Sir Hercules Robinson acted within his powers. The Viceroy is the conservator of the rights and interests of the whole population, and it must be evident that grave evils would ensue should a dissolution take place before supplies had been granted.

The exercise of the prerogative of mercy is such an important function of the Governor, and he is so liable on some occasions to have strong pressure brought to bear upon him in connection with it, that it will be well to quote at length the instructions received a few years ago upon this point. The mode of procedure in capital cases has already been referred to, and in other cases the Governor is instructed not to pardon or reprieve any offender without receiving the advice of one, at least, of his Ministers; and in any case in which such pardon or reprieve might directly affect the interests of the Empire, or of any country or place beyond the jurisdiction of the Government of the colony, the Governor shall, before deciding as to either pardon or reprieve, take those interests specially into his own personal consideration in conjunction with such advice as aforesaid. In another part of his instructions the Governor is permitted to act in opposition to the advice of the Executive Council "if he see sufficient cause," but he is to report any such matter to the Sovereign without delay.

One exception to the rule that every exercise by the Governor of the Royal prerogative is subject, practically, to the control of the Legislature, occurs in connection with the exercise of his office as Commander-in-Chief of the land and sea forces. The Governor's powers in this regard are defined and regulated by the Military and Naval Forces Regulation Act of 1871, which, after providing for the raising and maintenance of a standing force, goes on to vest the supreme command in the "Governor," which title, in the interpretation clause, is defined to mean "the Governor with the advice of the Executive Council," *unless the context shall otherwise indicate.* Full powers with relation to the Volunteer Force are also bestowed on the Governor by the Volunteer Regulation Act of 1867, but in this, as in the former statute, "Governor" only means "the Governor with the advice of the Executive Council," *if this meaning is not inconsistent with the context or subject-matter.* It will at once be seen that these are both important limitations, as in certain imaginable contingencies the Governor is left free to act on his own responsibility. This places the Governor almost in the position of the Commander-in-Chief in England (when such an officer exists, which is very seldom, the control of the army usually being vested in Generals commanding-in-chief); that is, he has at times the absolute disposal of the armed force of the colony. This power is peculiar to New South Wales, as in other British colonies the Governor possesses no more power over the military than he does over any civil department of the Service. The position of the Governor as Captain-General does not, however, give him power to take the direct command of Imperial troops, should any such be stationed in the colony.

As regards the far more important power of the Governor to proclaim martial law, different opinions are held. But there is no doubt, as the power has not been conferred by any statute in force in the colony, that, if it exists, it must be a matter of prerogative. The necessity for proclaiming martial law has happily never occurred since the advent of Responsible Government.

THE EXECUTIVE.

The Executive Council is composed of the ten Ministers, namely: the Chief Secretary, the Treasurer, the Attorney-General, the Secretary for Lands, the Secretary for Public Works, the Minister of Justice, the Minister of Public Instruction, the Secretary for Mines and Agriculture, and the Postmaster-General, with sometimes a Vice-President of the Executive Council, who is without a portfolio. These form the Cabinet, and, of course, are responsible to Parliament. The Ministry, as the advisers of the Governor, must also retain his confidence; but, practically, this is seldom likely to be withdrawn, so long as they command a working majority in the Assembly. The Governor may dissolve Parliament although the Ministry have not sustained a defeat, and in this case the continued existence of any Government would depend directly on the vote of the constituencies, but such a contingency can happen but seldom.

It is rare for more than one Minister to be selected from the Upper House, although at the present time there are two, and it will thus be seen that the principle of the responsibility of members of the Government to Parliament is fully carried out. For every act of the Governor as Viceroy some Minister is responsible to Parliament; and even in matters of Imperial interest, where the final onus rests upon the Governor, he himself is responsible to the Imperial Government, whose members are under the control of the House of Commons, so that no loophole is left for the exercise of any arbitrary act. The Crown, except in two instances (appeals to the Privy Council, and the bestowal of titles), acts towards the Executive through its representative, the Governor; and so long ago as the inception of Responsible Government, Earl Grey declared, in an official despatch, that he should make "a judicious use of the influence, rather than of the authority of his office," which wise maxim has usually been followed. But in extreme cases, such as when his sanction is requested to any illegal proceeding, the Governor is bound, without question, to keep the law, though he may thereby be brought into hostile relations with the Cabinet. Sir Michael Hicks-Beach, in a communication to the Governor-General of Canada in 1879, clearly laid down the doctrine that the Governor of any British Colony "has an unquestionable constitutional right to dismiss his Ministers, if from any cause he feels it incumbent on him to do so." This does not militate against the doctrine of responsibility, for if the Ministry appointed by the Governor do not possess the confidence of Parliament, they cannot hold office, and hence the Governor will be forced to give way, or else persevere till he can select a Ministry whom the Assembly will accept. The final control will thus be, as in every other case, with the representatives of the people. In matters of routine the Governor will necessarily act on the advice of his Ministers, and in most cases relating to the internal economy of the departments, he will even adopt the individual recommendations of the Ministers by whom they are severally controlled.

As regards matters of purely Imperial interest, the Governor is responsible to the British authorities for their due conservation. If, in consequence of his action on any such matter, he is involved in a dispute with his Ministers, he is bound to refer them to the Sovereign, should his action have been endorsed by the Colonial Office. If his conduct is not approved of in England he would most likely be recalled. It follows from this, that in no case can the Governor be held to be responsible directly to Parliament for his conduct. His Ministers are responsible, but personally he has only to render an account to the Crown itself—that is, to the Imperial Parliament.

The Executive Council cannot discharge any function unless duly summoned by the Governor, and at least two members, besides the Governor or presiding member, are present to form a quorum. Formal minutes are, of course, kept of all proceedings.

The Executive Council, as at present constituted, is as follows:—

Premier and Colonial Treasurer.......	The Hon. George Houstoun Reid
Chief Secretary	The Hon. James Nixon Brunker
Attorney-General	The Hon. John Henry Want, Q.C.
Secretary for Lands	The Hon. Joseph Hector Carruthers
Secretary for Public Works..............	The Hon. James Henry Young
Minister of Public Instruction and of Labour	The Hon. Jacob Garrard
Minister of Justice........................	The Hon. Albert John Gould
Postmaster-General	The Hon. Joseph Cook
Secretary for Mines and Agriculture..	The Hon. Sydney Smith
Vice-President of the Executive Council and Representative of the Government in the Legislative Council (without portfolio)	The Hon. Andrew Garran, LL.D.

Since the introduction of Responsible Government there have been twenty-eight Ministries, the average tenure of office, excluding the Ministry at present in power, being about one year and five months. Nine Governments have been displaced by votes of censure, expressed or implied; three have resigned through having been defeated on important measures of policy; while two have retired on being saved from defeat only by the Speaker's casting-vote, and three others through a motion for the adjournment of the House being carried against them. Three Ministries were merged into the succeeding ones; five resigned without a direct vote having been carried against them, but in consequence of not possessing a working majority; one Government fell to pieces through internal disagreements; and one resigned in consequence of the Governor declining to appoint to the Legislative Council a certain number of its nominees.

THE PARLIAMENT.

It seems a singular omission in the Constitution Act that no definition is given of the relative powers of the Legislative Council and Legislative Assembly. Such is the fact, but little inconvenience has arisen thereby, since by common consent it has been agreed that the precedents regulating the proceedings and relations, *inter se*, of the two Houses of the Imperial Parliament shall be followed, as far as applicable, in New South Wales. The Constitution Act provides that all money Bills shall be introduced in the Lower House only. The important rule of the House of Commons, affirmed two hundred years ago and constantly enforced ever since, that "all aids and supplies, and aids to Her Majesty in Parliament, are the sole gift of the Commons, and it is the undoubted right of the Commons to direct, limit, and appoint in such Bills the ends, purposes, considerations, conditions, limitations, and qualifications of such grants, which ought not to be changed or altered by the House of Lords," is also held to be in force as regards the Parliament of this colony, and has generally been recognised and acted upon.

The two Houses, however, do not possess the most important of the privileges of the Imperial Parliament, namely, the right of punishing for contempt, although the Legislative Assembly has, on one occasion, punished one of its members, by expelling him for conduct, beyond its precincts, assumed to be dishonourable. As regards disorderly conduct within the walls of the Chamber, it has been held by the Supreme Court, and affirmed by the Privy Council, that the Assembly only possesses the power of suspending a member for disorderly conduct for the period of the sitting at which he displayed such conduct. A member may also be removed from the House by order of the Speaker if he persists in obstruction or contemns the Standing Orders; but fortunately this course has seldom been rendered necessary.

Witnesses may be summoned to give evidence before either House, or before committees of the Council or Assembly, the necessary powers for compelling their attendance having been conferred by an Act passed in

1881. Any person disobeying a summons may be arrested on a Judge's warrant, and the maximum penalty for refusing to give evidence is imprisonment for one calendar month.

As regards the maximum number of members of the Legislative Council, no limit is assigned by the Constitution Act, although the minimum number is fixed at twenty-one. It will be seen that this gives power to a Governor to quash any possible obstruction on the part of the Council to the will of the Government and the Lower House by "swamping" the Council. Such a proceeding, however, can hardly be held to be allowable, except under extreme circumstances. As a matter of fact, an attempt to "swamp" the Council was made during one of the premierships of the late Sir Charles Cowper, but public opinion condemned the course most strongly, although the somewhat peculiar circumstances of the case were thought at the time to justify the Governor's action. The authorities in England severely rebuked the Governor (Sir John Young) for the course he had taken, and since then "swamping" the Council has never been seriously entertained, nor is there much chance that it will ever again be attempted. The principle in fact has been affirmed, on the basis of an understanding entered into between Sir John Young and the leading statesmen of the day (on both sides of the House), that the members of the Legislative Council should be limited to a convenient number, and that no nominations should ever be made merely for the purpose of strengthening the party which happens to be in power. A deadlock between the two Houses is provided against by the universal feeling that the Assembly represents the will of the people, and in such case the Council would certainly have to give way to the deliberate will of the people's representatives. The Council is intended as a check to hasty legislation; and it doubtless acts as a useful "brake" to violent party feeling.

THE LEGISLATIVE COUNCIL.

As before stated, the members of the Upper House are nominated by the Governor, the minimum number composing the House being fixed at twenty-one. No limit as to numbers is fixed by the Constitution Act, but in accordance with the arrangement already described the number is practically kept down by the exclusion of all purely political appointments. As the number of members of the Assembly has increased to 125, the number of members composing the Council in March, 1897, (64) will not be considered an unfair proportion, as the increase is in about the same ratio as that of the Assembly. Every member of the Council must be of full age, and either a natural-born or a duly naturalised subject. Four-fifths of the members must be persons not holding any paid office under the Crown, but this is not held to include officers "in Her Majesty's sea and land forces on full or half pay, or retired officers on pensions." Though the appointment is for life, a member may resign his seat, and he also forfeits it by absence from two consecutive sessions without leave, by becoming naturalised in a foreign State, by becoming bankrupt, by becoming a public contractor or a defaulter, and by being attainted of treason or being convicted of felony or any infamous crime. The Governor appoints, and, if necessary, removes the President, who may speak in debate, but can only give a casting-vote. An attendance of one-third of the members on the roll was formerly necessary to constitute a quorum, but an Act has been carried reducing the proportion to one-fourth. The Council must hold a sitting at least once in every year, and no greater interval than twelve months must elapse between session and session. The proceedings are regulated by standing orders, which are, in the main, similar to those of the Assembly, the latter being framed on the model of the rules obtaining in the House of Commons. No member may sit or vote till he has taken the oath of allegiance, or the affirmation prescribed in lieu of that oath.

THE LEGISLATIVE ASSEMBLY.

In the Session of 1892–3, an Act was passed, entitled the Parliamentary Electorates and Elections Act of 1893, by which the course of procedure with regard to elections for the Legislative Assembly of New South Wales was almost entirely changed. The enactments under which such elections had been conducted up to that time—the Electoral Act of 1880, and the Wentworth Subdivision Act—were repealed upon the passing of the Act of 1893, with the exception of certain provisions which have since been abrogated by proclamation. During the year 1896 several important alterations were made in the 1893 Act in the direction of the extension of the franchise, and of the removal of restrictions placed upon electors changing their residence from one district to another.

The main principles of the new electoral system may be thus summarised:—The number of members of the Legislative Assembly, which had grown by virtue of the Expansion Clauses of the Act of 1880 from 108 to 147, was reduced to 125, and the number of electorates, now denominated Electoral Districts, was increased from 74 to 125. Under the new system, therefore, there are exactly as many members as electorates, or in other words, there are single electorates. This, of course, involved a complete re-distribution of the electorates, and special machinery had to be created in order that this might be done. In accordance with the Act three Commissioners were appointed, to whom was entrusted the duty of dividing the colony into 125 electorates, each containing as nearly as might be the same number of electors. In order to ascertain the quota of electors to be apportioned to each electorate, the number of resident electors on the roll for 1892–3, which happened to be 282,851, was divided by 125, and the quotient, 2,263, was fixed as the standard number of electors entitled to one representative. For subsequent distributions the number of electors on the roll at the time of such distributions will be divided by 125, in order to arrive at a new quota. Re-adjustments are to be made shortly after the taking of each Census, and also, if necessary, four or five years after the taking of each Census. In marking out the new Electoral Districts, the Commissioners were required to form them so as to include the standard number of electors as nearly as possible; but at the same time, in order to avoid inconvenient divisions, they were allowed a margin of 200 voters each way, while in exceptional cases, on the Commissioners furnishing satisfactory reasons, the margin might be as much as 600 either way.

The qualification for an elector is that he must be a natural-born subject who has resided in New South Wales for a continuous period of one year, or a naturalised subject who has resided in the colony continuously for one year after naturalisation. It was provided in the principal Act that in either case he must have resided three months continuously in the electoral district for which he claimed to vote; but by the amending Act 60 Vic. No. 25 this period was reduced to one month. Every such person, being of the full age of 21 years, and not otherwise disqualified, is entitled to have his name on the electoral roll, and to have an elector's right issued to him. The persons disqualified under the new system were the same as those disqualified under the Act of 1880—namely, persons in the Naval or Military Service on full pay (except militia or volunteers); the Inspector-General or Superintendent of Police, or any person connected with the Police Force; and persons of unsound mind, or in the receipt of public charity, or criminally convicted; but the franchise was extended to the police force, including the Inspector-General and the Superintendents, in the course of the year 1896, by Act 60 Vic. No. 24. The disqualifications mentioned in the Constitution Act remain unchanged.

Power was given to the Governor under the Act of 1893 to subdivide each electoral district into divisions, and to appoint to each district an Electoral Registrar, with Deputy Registrars for the several divisions. It is one of the duties of these Registrars and Deputy Registrars to issue certificates known as electors' rights to those entitled to them in their several divisions. The electors' rights are printed in red ink upon paper specially prepared to prevent fraudulent imitations, with butts, like cheques, in accordance with a form as shown in Schedule A of the Act. They are bound in books, and numbered consecutively in black figures. Every person who has established his qualification to vote, and who has been placed on the electoral roll, is entitled to receive an elector's right upon signing his name in a book kept for that purpose, as well as on the butt and the face of the right itself. Under the principal Act an elector who removed from one district to another within three months of an election was practically disfranchised; but, as stated above, this period has now been reduced to one month, and until the elector is qualified to vote in the district to which he has removed he may use his right in his old district. Provision is also made in the event of a right being lost or defaced. Every elector's right remains in force until cancelled. It is provided by the amending legislation of 1896 that an elector who has changed his abode from one district to another may obtain a right for his new district after he has resided one month therein, and may have his name inscribed on the Additional Roll. When the Registrar of any district grants an application for an elector's right other than in lieu of one held for another district, he inscribes the name of the elector in a Provisional List, copies of which, during the first week of each month, are exhibited at every post-office and police-office within the district, so that to any name objection may be taken and heard at the Revision Court of the district, to be presided over by a Stipendiary or Police Magistrate. All names passed at the Revision Court are then inscribed in the Additional Roll.

During the first week in August of each year, the Registrar must make out a general list of all persons on the electoral roll for his district, as well as of those to whom electors' rights have been issued since the last roll was printed; and copies of all such lists are exhibited for public inspection at every post-office in the electoral district. Any person objecting to any name upon the list must give to the Registrar, in writing, his reasons for such objection, and the Registrar must notify the same to the person objected to. Every Registrar is supplied quarterly, by the District Registrar of Births, Deaths, and Marriages, with a list of all males above the age of 21 years whose deaths have been registered within the quarter. The Comptroller-General of Prisons and the Inspector-General of Police must forward quarterly to the Minister charged with the administration of the Act a list of all males above the age of 20 years in any gaol, lock-up, or other place of detention; and the Minister must send to the Registrar of each district such particulars as may be necessary for the purification of the electoral roll for such district. The Registrar must then write on a copy of the electoral roll, against the name of every person on the lists supplied to him as above, the words "dead" or "in custody, disqualified," or simply "in custody" where the particulars supplied do not appear to be such as to disqualify the person. A Revision Court is held in October each year, at which objections may be heard, and claims for insertion on the lists considered; and from the lists, when duly corrected and certified to by the magistrate presiding in the Court, the electoral roll is printed. In the year 1900 and every third year thereafter the General List is to be made up from the butts of the electors' rights.

Writs for the election of members of the Assembly are issued by the Governor. The writs for a General Election are required to be issued within four days from the proclamation dissolving Parliament, and are made returnable not later than thirty-five days from the date of issue. Parliament must meet not later than seven days from the return of the writs. The polling day for a General Election is fixed as the eighteenth day from the issue of the writs.

A person, to be qualified as a candidate, must be the holder of an elector's right. Each candidate must be nominated by at least six electors for the district. The nomination must be made in writing, signed by the nominators, and endorsed by the candidate, as consenting to the nomination. No elector can have more than one vote in the colony, or, in other words, the "one man one vote" principle is enforced. No elector can nominate more than one candidate. No deposit from a candidate is required. Proper provision is made for the appointment of Returning Officers, deputies, poll-clerks, and scrutineers, much as in the Act of 1880. The poll is open from 8 a.m. to 6 p.m. in the months from October to March inclusive, and from 8 a.m. to 5 p.m. from April to September inclusive. Every person claiming to vote must exhibit his elector's right, satisfy the Returning Officer that he is the person on the roll who should possess that right, and demand a ballot-paper. He is then furnished with a ballot-paper, containing the names of the candidates, and his elector's right, as well as the butt, is stamped to denote that he has voted at that election. The elector has then to retire to some unoccupied compartment of the polling-booth, there to strike out the names of all the candidates on the paper, except the one for whom he votes, and the ballot-paper, folded so that the names are not visible, is placed by him in the ballot-box. Provision is made whereby an elector can record his vote if away from his own electorate. At the close of the poll the votes are counted, and the result declared, in the ordinary manner.

Very stringent clauses against bribery, treating, or intimidation are included in the Act. It is even forbidden to make a wager on the result of an election under a penalty of from £5 to £50. There are also sections providing for the appointment of a Committee of Elections and Qualifications, with powers similar to those conferred by the Act of 1880.

The disqualifications for membership of the Legislative Assembly, provided by the Constitution Act, still remain in force. They are as follow:—

1. He must not be a member of the Legislative Council.
2. He must not hold any office of profit under the Crown, either for a term of years or during pleasure.
3. He must not be in any way interested in any contract for the public service.

By the Constitution Act Amendment Act of 1884, the disqualification of persons holding office of profit was declared not to apply to the Colonial Secretary or any other member of the Ministry. The third disqualification also does not apply to any contract made by a company consisting of more than twenty persons. If any disqualified person be elected, the election is voided by the House, and should such person presume to sit or vote he is liable to a fine of £500.

By an Act assented to on the 21st September, 1889, members of the Assembly are allowed the sum of £300 per annum to reimburse them for expenses incurred in the discharge of their Parliamentary duties.

Before taking his seat each member must take the oath of allegiance in the prescribed form, or make an affirmation in lieu of it. A member may resign his seat at any time, and he is held to have vacated it under any of the following conditions:—Absence during a whole session without leave, naturalization in a foreign country, bankruptcy, being a defaulter, or convicted of treason, felony, or any other infamous crime.

The Act 37 Vic. No. 7 provides that no Assembly can prolong its existence beyond the term of three years. One session, at least, must be held every year, and twelve months must not elapse between any two sessions. On meeting after a general election, the first business is to elect a Speaker, who has only a casting vote. Twenty of the members (exclusive of the Speaker) constitute a quorum.

The first Parliament elected under the Constitution Act met on the 22nd May, 1856, just six months after the proclamation of the Constitution. The duration of Parliament, unless it should be previously prorogued, was originally fixed at five years, but in 1874 an Act was passed establishing triennial Parliaments, which has ever since remained law. Since the inauguration of Responsible Government there have been seventeen appeals to the people, so that it will be seen the duration of each Assembly has not averaged even the shorter period of life to which its existence is now limited. The subjoined table gives the duration of each Parliament elected under Constitutional Government:—

Parliament.	Opened.	Dissolved.	Duration.			No. of Sessions.
			Yr.	mth.	dy.	
First	22 May, 1856...	19 Dec., 1857...	1	6	27	2
Second	23 March, 1858...	11 April, 1859..	1	0	19	2
Third	30 Aug., 1859...	10 Nov., 1860...	1	2	11	2
Fourth	10 Jan., 1861...	10 Nov., 1864...	3	10	0	5
Fifth	24 Jan., 1865...	15 Nov., 1869...	4	9	22	6
Sixth	27 Jan., 1870...	3 Feb., 1872...	2	0	7	3
Seventh	30 April, 1872...	28 Nov., 1874...	2	6	29	4
Eighth	27 Jan., 1875...	12 Oct., 1877...	2	8	15	3
Ninth	27 Nov., 1877...	9 Nov., 1880...	2	11	13	3
Tenth	15 Dec., 1880...	23 Nov., 1882...	1	11	8	3
Eleventh	3 Jan., 1883...	7 Oct., 1885...	2	9	4	6
Twelfth	17 Nov., 1885...	26 Jan., 1887...	1	2	9	2
Thirteenth	8 March, 1887...	19 Jan., 1889..	1	10	11	3
Fourteenth	27 Feb., 1889...	6 June, 1891...	2	3	10	4
Fifteenth	14 July, 1891...	25 June, 1894...	2	11	12	4
Sixteenth	7 Aug., 1894...	5 July, 1895...	0	10	29	1
Seventeenth	13 Aug., 1895..	....	......	......	......	...
	Average		2	3	14	3 to 4

The first general election under the new Act was held on the 17th July, 1894. The number of electors on the roll was 298,817, but of this number only 255,802 had obtained their electoral rights, so that

14·4 per cent. were apparently disfranchised. The lists, however, were swollen by the inclusion of deceased persons, and others who had left the colony, and probably the proportion of electors who had failed to obtain their rights was not more than 11·4 per cent. Excluding the constituency of Inverell, where there was no contest, the number of electors upon the roll in the 124 districts where the candidates went to the poll was 296,749, of which number 254,105, or 85·63 per cent., had received their rights. The persons who recorded their votes numbered 204,246, forming 68·82 per cent. of the electors upon the roll in the contested constituencies, and 80·38 per cent. of those who were entitled to exercise the franchise because they were the possessors of electoral rights. At the preceding election only 64·39 per cent. of the votes on the rolls in contested electorates were cast, so that, despite the extra trouble caused by the introduction of the new system, there was a gratifying increase in the number of persons who exercised their right to vote. At the same time, it must not be forgotten that the "one man one vote" system came into operation in 1894 for the first time.

The general election of 1895 was not so satisfactory as the preceding one. First of all, the number of electors upon the roll was only 267,458, as compared with 298,817 a year before. As already explained, the rolls in 1894 included the names of many deceased persons, and others who had left the colony, but when full allowance is made on this score it is still evident that the residential period of three months (now reduced to one month), and the absence of any provision by which an elector who had removed from one district to another might use his right in his old electorate, were responsible for the disfranchisement of voters on a somewhat large scale. Of the 267,458 electors upon the roll in 1895, 253,125, or 94·66 per cent., had obtained their rights, as compared with 85·6 per cent. in 1894. For eight electorates, members were returned unopposed. In the 117 contested districts the electors upon the roll numbered 252,267, of whom 238,233, or 94·44 per cent., held electors' rights. The number of votes recorded was 153,034, forming 60·66 per cent. of the electors upon the roll, and 64·24 per cent. of the electors who held their rights. These proportions are much lower than in 1894, when the corresponding figures were 68·82 per cent. and 80·38 per cent. respectively.

Speaking generally, it may be said that the electors display a considerable amount of interest in the public affairs of the colony, and the percentage of votes cast is not far below that recorded in the United Kingdom, where momentous issues have been decided by a general election. It is true that in the United Kingdom the system of plural voting is still in force, and the number of non-resident voters is very large; but the elections there extend over a fortnight, while in New South Wales they are all held on one day, and, furthermore, in this colony some of the electoral districts are of vast extent, and many electors can only record their votes at considerable inconvenience to themselves.

The number of males of full age compared with the total population is very large, the proportion at the last Census being 29 per cent. The number of persons actually enrolled at the general election in 1895 amounted to 20·3 per cent., or over one-fifth of the total population. The average number of electors on the roll per member was 2,060, and the estimated population to each member was 10,145. The subjoined table gives the result of all the general elections which have taken place under Representative Government:—

No. of Parliament.	Voters on Roll.	No. of Electors to a Member.	Total Members returned.	Members unopposed.	Votes on Roll in contested Electorates.	Votes recorded.	Percentage of Votes recorded.	Informal Votes.	Percentage of Informal Votes.
First	44,526	825	54	*	*	*	*	*	*
Second	72,177	1,002	72	14	54,896	27,894	50·81	*	*
Third	88,346	1,227	72	19	63,022	27,490	43·62	22	0·08
Fourth............	106,189	1,475	72	19	75,676	28,340	37·45	29	0·10
Fifth	119,872	1,665	72	15	90,736	44,311	48·84	31	0·07
Sixth	128,734	1,788	72	11	108,080	56,331	52·12	102	0·18
Seventh	151,798	2,108	72	8	125,488	60,004	47·82	80	0·13
Eighth	160,843	2,234	72	10	104,575	57,651	55·13	334	0·58
Ninth	160,945	2,205	73	16	120,698	62,172	51·51	*	*
Tenth	188,500	1,745	108	14	140,848	90,657	64·36	1,785	1·97
Eleventh	196,289	1,737	113	17	166,260	96,842	58·26	2,002	2·07
Twelfth	232,190	1,900	122	8	203,669	124,378	61·07	2,564	2·06
Thirteenth	256,406	2,068	124	17	226,228	131,062	57·93	2,275	1·73
Fourteenth	280,160	2,045	137	13	257,763	154,924	60·10	2,641	1·70
Fifteenth.........	305,456	2,166	141	7	285,897	184,091	64·39	3,642	2·00
Sixteenth.........	298,817	2,296	125	1	296,749	204,246	68·82	3,310	1·62
Seventeenth ..	267,458	2,139	125	8	252,267	153,034	60·66	1,354	0·88

* Unrecorded.

The cost of the general election of 1894 was £25,989, giving an average of £208 for each of the 125 constituencies, or, excluding Inverell, where no contest took place, nearly £210. The sum of 1s. 9d. was expended on each of the 298,817 voters on the rolls, and 2s. 7d. on every person who voted. In 1895 the general election cost £20,405—an average of over £163 per electorate, and £174 for each of the 117 contested districts. The cost per elector on the rolls was 1s. 6d., and the cost per person who voted 2s. 8d. In addition to the amount expended on the general elections, a sum of £22,547 was expended during 1894 in inaugurating the new electoral system, as allowances to electoral registrars and deputies and to the police, in printing, and in advertising; while in 1895 the expenses of the system amounted to £12,837. Since the passing of the Act establishing triennial Parliaments, the average duration of the life of the Assembly has been under two years and three months. Taking the expenditure for this period at the average yearly rate of 1894 and 1895—£17,692 per annum—and adding the mean cost of the last two general elections, a total of £63,004 is obtained as the cost of electing a Parliament of average duration under the present system. This gives an average of £2,520 for each of the 125 electoral districts into which the colony is divided, and, on the basis of the 1895 figures, 4s. 9d. for every voter enrolled, and 8s. 3d. for each vote cast.

FEDERATION.

At the present time a notice of the Constitution and Government of the colony would be incomplete without some reference to the question of Australian Federation, which is now more prominently before the public than it has been at any previous stage of Australian history. It has already been shown in the initial chapter of this work that the question was not overlooked by the framers of the first free Australian Constitution, who proposed the establishment of a General Assembly "to make laws in relation to those intercolonial questions that have arisen, or may hereafter arise," and who, in fact, sketched out a tolerably comprehensive federation scheme. Unfortunately, however, that proposition was included with another for the creation of hereditary nobility, and in the storm of opposition and ridicule with which the latter idea was greeted, the former sank out of sight. From time to time since Responsible Government came into being the evil of want of union among the Australian colonies has been forcibly apparent, and the idea of federation has gradually become more and more popular among the people. Some years ago the movement took such shape that, as the result of an intercolonial conference, the matter came before the Imperial Parliament, and a measure was passed, permitting the formation of a Federal Council, to which any colony that felt inclined to join could send delegates. The first meeting of the Federal Council was held at Hobart, in January, 1886. The colonies represented were Victoria, Queensland, Tasmania, Western Australia, and Fiji. New South Wales, South Australia, and New Zealand declined to join, but South Australia sent representatives to a subsequent meeting. The Council has held six meetings, at which several matters of intercolonial interest were discussed; but being from its very inherent constitution only a deliberative body, having no executive functions whatever, it possessed no control of funds or other means to put its legislation into force. The advocates of Federation were therefore dissatisfied with the position the question was in, and agitation was instituted with a view of bringing about a more satisfactory state of things.

An important step towards the federation of the Australasian Colonies was taken in February, 1890, when a Conference, consisting of representatives of each of the seven colonies of Australasia, was held in the Parliament House, Melbourne. The Conference met on February 6, and there were thirteen members present, being two representatives from each of the colonies, except Western Australia, which sent only one. Sir Henry Parkes, Premier and Colonial Secretary, and Mr. W. McMillan, Colonial Treasurer, represented New South Wales. Mr. Duncan Gillies, Premier of Victoria, was elected President of the Conference. The members held seven meetings, and discussed the question before them at considerable length. At the last meeting the Conference adopted an address to the Queen, expressing their loyalty and attachment, and submitting, as the result of the Conference, certain resolutions which affirmed the desirableness of an early union, under the Crown, of the Australian colonies, on principles just to the several colonies; that the remoter Australasian colonies should be entitled to admission upon terms to be afterwards agreed upon; and that steps should be taken for the appointment of delegates to a National Australasian Convention, to consider and report upon an adequate scheme for a Federal Constitution.

In accordance with the terms of that resolution, delegates were appointed by the different Australasian Parliaments, and on the 2nd March, 1891, the National Australasian Convention commenced its sittings in the Legislative Assembly Chambers, Macquarie-street, Sydney, having been convened at the instance of Mr. James Munro, the Premier of Victoria. There were forty-five Members of the Convention altogether, New South Wales, Victoria, Queensland, South Australia, Tasmania, and Western Australia (which had only recently been placed in possession of the privilege of Responsible Government) each sending seven delegates, and New Zealand three. At the first meeting of the Convention the seven delegates from Western Australia were absent, as well as three other delegates representing Victoria, Queensland, and New Zealand respectively; but in the course of a few days the whole of the delegates arrived, and the Convention was complete.

The first business transacted by the Convention was the unanimous election of Sir Henry Parkes as President. Mr. F. W. Webb, Clerk of the Legislative Assembly of New South Wales, was appointed Secretary to the Convention, and Sir Samuel Griffith was elected Vice-President. Mr. (now Sir) J. P. Abbott, Speaker of the New South Wales Legislative Assembly, was subsequently elected Chairman of Committees. Rules of Procedure, similar in the main to those under which the business of Parliament is conducted, were adopted, and arrangements were made for the admission of the public to the debates, and for the publication of an official record of the proceedings.

A series of resolutions was moved by Sir Henry Parkes, setting forth certain principles necessary to establish and secure an enduring foundation for the structure of a Federal Government, and approving of the framing of a Federal Constitution. These resolutions were discussed by the Convention during nine sittings, part of the time in Committee of the Whole, and after amendment were finally adopted. The resolutions affirmed the following principles:—

1. The powers and rights of existing colonies to remain intact, except as regards such powers as it may be necessary to hand over to the Federal Government.

2. No alteration to be made in States without the consent of the Legislatures of such States, as well as of the Federal Parliament.
3. Trade between the federated colonies to be absolutely free.
4. Power to impose Customs and Excise Duties to be in the Federal Government and Parliament.
5. Military and Naval Defence Forces to be under one command.
6. The Federal Constitution to make provision to enable each State to make amendments in its Constitution if necessary for the purposes of Federation.

Further resolutions approved of the framing of a Federal Constitution which should establish a Senate and a House of Representatives—the latter to possess the sole power of originating money Bills; also a Federal Supreme Court of Appeal; and an Executive consisting of a Governor-General, with such persons as may be appointed as his advisers.

Three Committees were then chosen among the delegates—one to consider matters relating to Finance, Taxation, and Trade Regulations; a second to deal with the establishment of a Federal Judiciary; and a third to prepare and submit a Bill for the establishment of a Federal Constitution. On Tuesday, March 31, Sir Samuel Griffith, as Chairman of the Committee on Constitutional Machinery, brought up a draft Constitution Bill, which was fully and carefully considered by the Convention in Committee of the Whole, and was adopted on Thursday, April 9. On the same day the Convention was formally declared to be dissolved, and it was left to the colonies individually to adopt or reject the scheme presented to them by the Convention.

In January and February, 1895, a Conference of Premiers, at which all the colonies except New Zealand were represented, was held at Hobart, for the purpose of arranging a scheme of federation on a basis which might secure a more speedy realisation of the hopes of federationists. It was decided to ask the Parliament of each colony to pass a Bill enabling the electors qualified to vote for members of the Lower House to choose ten persons to represent the colony on a Federal Convention. The work of the Convention, it was determined, should be the framing of a Federal Constitution, to be submitted to the electors of the colonies for their approval by means of the referendum. During the year 1896 Enabling Acts were passed by New South Wales, Victoria, South Australia, Tasmania, and Western Australia; and were brought into operation by proclamation on the 4th January, 1897. On Anniversary Day, the 26th January, the writs were issued in New South Wales. The election was held on the 4th March, the representatives chosen by the people being:—Messrs. Edmund Barton, Q.C.; G. H. Reid, M.P. (Premier and Colonial Treasurer); J. H. Carruthers, M.P. (Minister for Lands); W. McMillan, M.P.; W. J. Lyne, M.P.; J. N. Brunker, M.P. (Chief Secretary); R. E. O'Connor, Q.C., M.L.C.; Sir J. P. Abbott, M.P. (Speaker of the Legislative Assembly); and Messrs. J. T. Walker and B. R. Wise. The Convention met in Adelaide on the 22nd March.

SHIPPING.

THE shipping returns of New South Wales are compiled from information taken from the ships' papers, and contain particulars relating to all vessels trading to places beyond the colony. The tonnage given is, in every case, the net registered tonnage according to British measurement. The arrival of a vessel must be notified to the Collector of Customs within twenty-four hours. If a vessel puts in at more than one port of the colony, she is returned as having entered the first port only; and if she has come from a country beyond Australasia by way of a port or ports in one or more of the other colonies, she is regarded as having arrived from the place whence she originally took her departure. When a vessel berths at a public or private sufferance wharf, a certain number of free lay days, regulated by the tonnage of the vessel and the amount of carrying capacity occupied by the cargo to be landed, are allowed in which to discharge, and after they have expired, tonnage dues are imposed, the rate being one farthing per registered ton per day if the vessel has been fully laden, and if she has been partly laden only, one halfpenny per ton per day for the first twenty-five days, and half that rate thereafter. If the vessel berths for the purpose of loading only, no free lay days, of course, are allowed, and the rate is one halfpenny per registered ton per day if the vessel is of 240 tons or more. On smaller vessels and on lighters berthing solely for the purpose of loading, a wharfage rate of ten shillings for each day or part of a day is imposed. In cases where a Government wharf has been let to a private company, the rent of the wharf is accepted by the State in lieu of tonnage dues.

A wharfage rate, which varies in amount with the kind of merchandise landed, is levied on all goods discharged on the wharves, unless they have come from one of the other Australasian colonies, or from the Pacific Islands, and are intended for transhipment, in which case they are exempt from wharfage; and on goods shipped the rate charged is half that levied on merchandise imported. No wharfage rates, however, are charged at the port of Newcastle. For every trading vessel, with the exception of a whaler or a ship which has put into port through stress of weather or for the purpose of effecting repairs, receiving orders, or taking in provisions, a harbour and light rate of fourpence per ton is required to be paid. The payment of the charge at one port affords immunity to the vessel at all ports of the colony for a period of six months, but after the expiration of that time the ship is liable to a similar charge when she again comes to a port in New South Wales.

Unless the master should hold a certificate entitling him to pilot his ship into and out of port, pilotage is charged for on arrival or departure at the rate of 2d. per ton, and 1d. per ton if the ship be in ballast. The smallest sum payable is £2 10s. at Sydney or Newcastle, and £1 5s. at any other place where there is a pilot establishment; and £20 is the maximum sum payable. A whaler is not subject to pilotage charges; 1d. per ton on arrival is charged for vessels entering a port for the purpose of refitting or docking, or in order to obtain coal for use on board, and 2d. per ton when she leaves; and vessels compelled to enter port through stress of weather, or for the purpose of effecting repairs, receiving orders, or taking in provisions, or because they are in distress, are charged 1d. per ton on arrival, and the same rate on departure.

When it is desired to remove a vessel from one part of the harbour to another, permission to do so must be obtained from the Harbour Master, and if this officer should make the removal, a fee is charged, the amount payable being £1 if the vessel does not exceed 300 tons; £2 10s. if she does not exceed £1,000 tons; and an additional £1 for every 500 tons or part thereof up to 2,000 tons. Before a vessel can sail, a certificate of clearance must be obtained from the Custom House. If the ship has put into more than one port of the colony, she is returned as having cleared at the last port only; and if she is bound for more than one port, she is returned as having left for the country in which her terminal port lies.

THE MARINE BOARD.

The Marine Board of New South Wales is a body composed of seven wardens, four of whom, including the President, are appointed by the Government, and three, who must be registered owners of shipping of not less than 250 tons, are elected triennially by owners of shipping of 100 tons and over. The Board supervises all matters relating to steam navigation, and transactions in connection with the issue, suspension, and cancellation of certificates of competency and service; the framing of harbour regulations; the preservation of ports, harbours, rivers, etc.; the licensing, appointment, and removal of pilots; the regulation of lighthouses, lights, and rivermarks, moorings, licenses to lighters, watermen's boats, ferries, harbour and river steamers, etc. In shipping transactions of a general nature, it acts in conjunction with the British Board of Trade, and has jurisdiction over all British ships. It holds inquiries into shipping casualties in all cases where a port in the colony is the first entered after the occurrence, or the survivors have landed in New South Wales. The law provides for the establishment of local boards under the superintendence of the Marine Board in Sydney, but so far only one—that at Newcastle—has been created.

Before certificates are issued by the Marine Board, certain conditions have, of course, to be fulfilled. It is necessary for a candidate for a master's foreign-going certificate to be at least 21 years of age, and to have served six years at sea; but for a master's certificate for the coastal trade the candidate may be one year younger, and have served two years less than in the other case. A first mate's foreign-going certificate is not issued to a person of less than 19 years of age, nor to one who has served for a smaller period than five years; while for a second mate's certificate the lowest age is 17 years, and the shortest period of service four years. For the coasting trade, the age of the person to whom a mate's certificate is issued must not be less than 19 years, but he is only required to have served three years at sea. A first-class engineer must be at least 22 years of age, and second and third-class engineers at least 21 years old. Marine surveyors' certificates are issued to persons who have passed the examinations necessary for the obtaining of an extra first-class engineer's certificate, to master mariners who have been in command for not less than five years, and to those who have an extra master's certificate. Pilotage certificates are granted to masters of British or foreign ships on passing the necessary examination, but they must have entered and left the port thrice with their vessels as masters or officers of the watch.

QUARANTINE.

The Board of Health has entire control of all matters relating to health, and may place in quarantine any vessel, if it deems it advisable to do so for the preservation of the public safety. There is only one quarantine station in the colony for persons. It is situated inside the north head of Port Jackson, and in equipment and suitability of position it is surpassed by few quarantine stations in the world. There are also two stations in Sydney Harbour—one at Bradley's Head and the other at Shark Island—and one at the port of Newcastle, where foreign live stock may be placed in quarantine; and at Randwick there is another station for the isolation of Australian stock. The regulations for the quarantining of animals are enforced by the Department of Mines and Agriculture.

INCREASE IN SHIPPING.

The records of the shipping trade of New South Wales, although carefully kept by the various Governors, are not available prior to the year 1822, the earlier registers relating to the colony's statistics having disappeared. There are in existence, however, numerous manuscript returns which record the shipping trade of the earlier years, and these will doubtless be published at some future date.

During the year 1822, the shipping amounted to 71 vessels entered, aggregating a tonnage of 22,924; and 60 vessels cleared, with a total tonnage of 20,793. Twenty-eight years afterwards, just before the separation of Port Phillip, the figures stood thus: 976 vessels entered, with a tonnage of 234,215, and 1,014 vessels cleared, with a tonnage of 263,849. In 1851, the year of the separation of Victoria from the parent colony, the trade fell to 553 vessels entered, measuring 153,002 tons, and 503 vessels cleared, of 139,020 tons; but in 1860, the year following the separation of Queensland, the shipping amounted to 1,424 vessels entered, with a tonnage of 427,835, and 1,438 vessels cleared, of 431,484 tons—a considerable advance on the figures of the previous year. From 1860 to the present time trade has rapidly increased, and at a greater rate than the population. In 1891, the shipping entered amounted to 2,821,898 tons; but this quantity fell to 2,804,549 tons in 1892, and to 2,590,371 tons in 1893. In 1894, however, the shipping entered rose to 2,859,968 tons, but the increase of 269,597 tons on the measurement of the vessels which entered the ports during the previous year did not represent a corresponding enlargement of the import trade, as there was a large accession to the tonnage coming to the colony in ballast—the bulk direct to Newcastle to load coal—probably in consequence of the scarcity of freights elsewhere in Australasia. The increase was maintained in 1895, which saw the largest amount of shipping in the history of the colony, namely, 2,929,758 tons entered—an increase on the 1894 figures of 69,790 tons, all but 608 tons of which was represented by vessels bringing cargo.

The rate of increase has been fairly constant, though checked occasionally by the occurrence of bad seasons here, or the failure of prices in the European markets. The following table shows the quantity and tonnage of shipping arriving in and departing from New South Wales, at intervals of five years, from the date of the earliest records to the year 1890, and for each of the five succeeding years :—

Year.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
1822	71	22,924	60	20,793
1825	85	24,559	75	22,688
1830	157	31,225	147	28,822
1835	260	63,019	269	66,964
1840	709	178,958	665	163,704
1845	597	105,352	614	103,961
1850	976	234,215	1,014	263,849
1855	1,152	353,323	1,185	362,482
1860	1,424	427,835	1,438	431,484
1865	1,912	635,888	2,120	690,294
1870	1,858	689,820	2,066	771,942
1875	2,376	1,109,086	2,294	1,059,101
1880	2,108	1,242,458	2,043	1,190,321
1885	2,601	2,088,307	2,583	2,044,770
1890	2,889	2,413,247	2,777	2,348,625
1891	3,021	2,821,898	3,100	2,872,338
1892	2,960	2,804,549	3,067	2,842,635
1893	2,914	2,590,371	2,916	2,602,957
1894	3,272	2,859,968	3,291	2,878,586
1895	3,121	2,929,758	3,090	2,930,280

The shipping tonnage of New South Wales greatly exceeds that of any other colony of the Australian group. Victoria stands next, after which come South Australia, Western Australia, New Zealand, Queensland, and Tasmania. Of the total shipping of Australasia in 1895, nearly one-third entered and cleared in New South Wales ports.

Nationality of Vessels.

The trade of the colony is, to a very large extent, carried on under the British flag, the deep-sea trade being in the hands of shipowners of the United Kingdom, and the coastal trade in local hands. There has, however, been a notable increase in foreign shipping since 1881. In 1870 the British shipping entered and cleared amounted to 1,333,410 tons, while in 1895 it was 5,215,174 tons, showing an increase of 3,881,764 tons. The foreign shipping amounted to 128,352 tons in 1870, and 644,864 tons in 1895, being an increase of 516,512 tons.

The advent of the French line of Messageries Maritimes, in 1883, and of two lines of German steamships some four years later, has tended to increase the amount of the foreign trade of the colony; but nevertheless the tonnage under the British flag in 1895 was 89·0 per cent. of the whole. The annexed table shows the respective amounts of British and foreign tonnage for the years mentioned:—

Year.	British.	Foreign.	Total.
	tons.	tons.	tons.
1870	1,333,410	128,352	1,461,762
1875	2,001,641	166,546	2,168,187
1880	2,259,924	172,855	2,432,779
1885	3,615,582	517,495	4,133,077
1890	4,156,963	604,909	4,761,872
1891	4,902,607	791,629	5,694,236
1892	4,977,850	669,334	5,647,184
1893	4,704,300	489,028	5,193,328
1894	5,191,971	546,583	5,738,554
1895	5,215,174	644,864	5,860,038

Of the tonnage set down as British, the larger portion is owned or registered in Australasia. Prior to 1891, the returns do not allow of the colonial shipping being divided between that belonging to Australasia and that belonging to other British colonies; but in 1870, out of 1,333,410 tons of shipping entered and cleared under the British flag, 964,718 tons, or 72·3 per cent., belonged to B[illegible]he great bulk being Australasian; in 1880, out of 2,259,924 tons entered and cleared, 1,499,236 tons, or 66·3 per cent., represented colonial shipping; while in 1895 the colonial shipping amounted to 2,970,524 tons (of which 2,882,579 tons were Australasian) out of a total of 5,215,174 tons, or 57·0 per cent. The amount of British, Australasian, and other colonial shipping entered into and cleared from New South Wales ports for the years shown was as follows:—

Year.	Shipping belonging—			Total, entered and cleared.
	To Great Britain.	To Australasia.	To British Colonies other than Australasia.	
	tons.	tons.		tons.
1870	368,692	964,718		1,333,410
1875	736,969	1,260,958		1,997,927
1880	760,688	1,499,236		2,259,924
1885	1,520,091	2,095,491		3,615,582
1890	1,577,172	2,579,791		4,156,963
1891	1,813,716	3,029,067	59,824	4,902,607
1892	2,058,982	2,859,277	59,591	4,977,850
1893	1,808,340	2,866,967	28,993	4,704,300
1894	2,135,711	3,016,817	39,443	5,191,971
1895	2,244,650	2,882,579	87,945	5,215,174

Compared with the figures just given, the tonnage of the foreign vessels trading with New South Wales will appear small. Taking the year 1895, for which the total tonnage of the principal nationalities is given below, Germany stands first, then France, then the United States. Norway is the only other nation whose carrying trade with the colony is important.

	Tonnage.
Germany	221,565
France	187,784
United States	127,723
Norway	62,918
Other nations	44,874
Total	644,864

STEAM AND SAILING VESSELS.

The records prior to the year 1876 do not distinguish the steamers from the sailing vessels, but the modern tendency to supersede sailing vessels by steam has been abundantly apparent in the nineteen years which have since elapsed. In 1876 the steam tonnage was 912,554 as compared with 1,215,171 tons of sailing vessels, being 42·9 per cent. and

57·1 per cent. respectively. In 1895 the relative positions were transposed, for the tonnage of sailing ships had increased but slightly over the figures of 1876, being only 1,412,322 tons, or 24·1 per cent., as against 4,447,716 tons of steam, or 75·9 per cent. of the whole shipping. The increase of steam tonnage for the nineteen years has, therefore, been over 387 per cent. The progress of the tonnage of each class will be seen from the following figures :—

Year.	Steam.	Sailing.	Year.	Steam.	Sailing.
	tons.	tons.		tons.	tons.
1876	912,554	1,215,171	1892	4,329,634	1,317,550
1880	1,550,372	882,407	1893	4,227,186	966,142
1885	2,791,843	1,341,234	1894	4,407,522	1,331,032
1890	3,654,814	1,107,058	1895	4,447,716	1,412,322
1891	4,299,791	1,394,445			

The advantage offered by the New South Wales trade to shipowners is illustrated by the large amount of tonnage coming to the colony in ballast, and the small amount leaving without cargo. A large proportion of the vessels arriving in ballast come from the ports of the neighbouring colonies, where they have delivered a general cargo, and, having been unable to obtain return freight, have cleared for Newcastle to load with coal. The largest amount of tonnage entered in ballast in any one year since 1870 was in 1895, when it reached 852,813 tons, and the largest amount cleared was 82,956 tons in 1891. The tonnage entered and cleared in ballast for the years shown was :—

Year.	Entered.	Cleared.	Year.	Entered.	Cleared.
	tons.	tons.		tons.	tons.
1870	237,246	21,004	1891	632,617	82,956
1875	320,921	12,830	1892	724,265	65,522
1880	217,763	16,219	1893	621,189	58,463
1885	345,366	53,381	1894	852,205	76,799
1890	544,264	66,846	1895	852,813	58,152

VALUE OF CARGOES.

As might be expected from the fact that over 29 per cent. of the tonnage which arrived in the colony in 1895 was in ballast, as against less than 2 per cent. of the clearances, the average value of freights outward was higher than of those inward. Thus the average value of the goods imported by sea was £4 17s. per ton, while that of the goods exported was £5 17s. 3d., or 20·9 per cent. higher. If, however, allowance be made for shipping in ballast, the mean value of the exports was £5 19s. 8d., or 12·5 per cent. lower than the imports, which averaged

£6 16s. 10d. per ton. New South Wales exports have, generally speaking, a high value per ton, and the fact that, when vessels entering and leaving in ballast are excluded, they have a lower average value than the imports, is due to the large amount of coal exported, the quantity for 1895 having been 2,166,230 tons weight—equivalent to over 1,470,000 tons measurement, out of a total of 2,930,280 tons.

It will be seen from the following table that in the case of the great majority of the countries with which the colony has commercial relations, the exports from New South Wales have a higher average value than the goods imported. The figures for Queensland are exceptional, as a large quantity of gold is imported from that colony:—

Country.	Value of Imports per ton.			Value of Exports per ton.		
	£	s.	d.	£	s.	d.
United Kingdom	14	13	5	21	5	3
Victoria	1	4	8	1	8	5
Queensland	11	8	9	3	6	2
South Australia	1	5	2	1	1	2
Western Australia	1	1	8	2	16	8
Tasmania	2	2	1	1	14	1
New Zealand	2	19	4	2	1	3
Other British possessions	2	5	1	1	19	5
Belgium, France, and Germany	4	18	11	20	12	6
United States	7	14	6	3	5	11
Other foreign countries	1	0	2	1	6	4
Average	4	17	0	5	17	3

The trade with Belgium, France, and Germany has been grouped together in the table, as it is impossible to find the true average value of the trade of each of those countries, on account of the great bulk of the Belgian trade being carried in French and German bottoms. The greater part of the trade classed under "Other foreign countries" was transacted with various groups of islands in the South Seas and with South American countries. During 1895 the proportion of tonnage entering in ballast from Victoria and South Australia was 35 per cent. of the arrivals from those two colonies, and from Western Australia 90 per cent., and this circumstance partly explains the low rate per ton of the imports from those colonies. As for the outward trade, the large quantity of coal shipped to the southern colonies lowers the general average value of the whole exports.

MOVEMENTS OF SHIPPING.

The following table shows the yearly movements of tonnage, exclusive of the coasting trade, of some of the principal nations of the world, and also of New South Wales, with the rate of tonnage per head of the population, the returns being made up to the latest date available:—

Country.	Tonnage.	Per Head of Population.	Country.	Tonnage.	Per Head of Population.
United Kingdom...	80,539,174	1·9	Italy	16,157,927	0·5
France	28,538,827	0·7	Spain	25,892,022	1·5
Germany	24,499,103	0·5	United States.....	33,748,992	0·5
Norway...............	5,477,012	2·7	Arg'ntineRepublic	13,666,087	3·5
Sweden...............	12,689,093	2·6	Canada	10,976,829	2·3
Netherlands.........	13,751,221	3·0	New South Wales.	5,860,038	4·6

Of the tonnage engaged in the outward trade of the colony, 15·0 per cent. went to the United Kingdom, though in value the exports were 54·5 per cent. of the total. The exports by sea to Victoria and the other Australasian colonies amounted to 51·3 per cent. of the whole, while in value they reached only 16·5 per cent. As regards the other British possessions, the tonnage of vessels carrying goods from New South Wales to their ports amounted to 6·2 per cent. of the whole, but the value only reached 2·1 per cent. In the case of foreign countries, the tonnage in 1895 amounted to 27·5 per cent. and the value to 26·9 per cent. The following table shows the tonnage entered from and cleared for Great Britain and the colonies, and some of the principal foreign countries, as well as the value of the cargoes; but it must be borne in mind that the tonnage figures represent the nominal tonnage of the vessels carrying the goods, and not the actual weight of the goods themselves, which latter information it is impossible to obtain:—

Country.	Entered.				Cleared.			
	Tonnage.		Value.		Tonnage.		Value.	
	Total.	Per cent.	Total.	Per cent.	Total.	Per cent.	Total.	Per cent.
	tons.		£		tons.		£	
United Kingdom......	437,618	14·9	6,420,107	45·2	440,785	15·0	9,371,418	54·5
Victoria	754,625	25·8	929,152	6 5	684,167	23·3	973,426	5·7
Queensland	298,982	10·2	3,419,650	24·1	274,828	9·4	909,013	5·3
South Australia	230,441	7·9	290,368	2·0	168,792	5·8	178,388	1·0
Western Australia	29,889	1·0	32,332	0·2	50,623	1·7	143,405	0·8
Tasmania	144,126	4·9	308,270	2·1	89,362	3·1	152,451	0·9
New Zealand..........	189,950	6·5	563,528	4·0	235,503	8·0	486,173	2·8
Other British Possessions	271,076	9·2	611,021	4·3	182,998	6·2	360,703	2·1
Belgium, France and Germany	131,912	4·5	652,648	4·6	162,846	5·6	3,358,609	19·6
United States	80,807	2·8	624,268	4·4	207,315	7·1	683,606	4·0
Other Foreign Countries................	360,382	12·3	362,703	2·6	433,061	14·8	569,464	3·3
Total	2,929,758	100·0	14,209,047	100·0	2,930,280	100·0	17,186,656	100·0

TONNAGE AND CREWS.

The average tonnage of vessels trading with the colony has gradually increased since 1845; previous to that year transports formed so large a portion of the total tonnage as to swell the average considerably. The average tonnage per ship at each decennial period since 1825 was as follows:—

Year.	Average tonnage of vessels.	Year.	Average tonnage of vessels.
1825	295	1865	329
1835	246	1875	463
1845	173	1885	797
1855	306	1895	939

Since 1870 the average tonnage of British and British-colonial vessels trading to New South Wales has increased by 153 per cent. in the one case and 112 per cent. in the other, while foreign vessels have increased in average tonnage by 228 per cent. during the same period. The advance in British and foreign shipping during the last decade has been very marked, as the following figures, which show the average tonnage of vessels inwards from 1870, attest:—

Year.	British.	Colonial.	Foreign.	Year.	British.	Colonial.	Foreign.
1870	706	306	449	1891	1,680	709	1,263
1875	742	379	557	1892	1,696	684	1,302
1880	1,031	476	732	1893	1,766	647	1,477
1885	1,312	602	997	1894	1,769	615	1,401
1890	1,624	600	1,330	1895	1,784	648	1,471

The natural corollary to the increase in the size of ships and the improvements to the rigging and fittings is the decrease in the number of hands required per ton, though the actual number of hands employed per vessel has increased. Intercolonial vessels in 1895 carried an average of 23 men to every vessel, or 1 man to every 28·4 tons. British vessels carried in 1895 an average complement of 48 men, or 1 man to every 36·9 tons; while foreign ships carried an average crew of 52 men, or 1 man to every 28·6 tons. In 1870 British ships carried 1 man to every 26 tons, intercolonial vessels 1 man to every 20 tons, and foreign vessels 1 man to 35 tons, the decrease in the tonnage per sailor in foreign vessels being due to the finer class of ships that began to trade here in 1883; these are fitted in the most modern fashion, and manned accordingly. The following figures show the average crews of British, colonial, and foreign vessels for the periods mentioned :—

Year.	British.	Colonial.	Foreign.	Year.	British.	Colonial.	Foreign.
1870	27	15	13	1891	51	25	41
1875	27	17	14	1892	50	25	54
1880	44	21	25	1893	54	23	61
1885	44	24	36	1894	50	22	52
1890	52	22	49	1895	48	23	52

PRINCIPAL PORTS.

The relative importance of the various ports of Australasia may be ascertained by an inspection of the following table, which shows the shipping and trade of the principal Australasian ports for the year 1895. From these figures the rank of Sydney becomes evident. Melbourne takes the first place as regards tonnage; but the figures for purposes of comparison should be reduced by a large amount—from 350,000 to 400,000 tons entered and a like quantity cleared, or altogether about 750,000 tons—to allow for the circumstance that the great ocean steamers whose terminal port is Sydney are counted in the homeward and outward voyages as twice entering and twice clearing at Port Phillip; and with this allowance the shipping of Melbourne is exceeded by that of Sydney, as the Victorian port is also surpassed in the value of its trade. Newcastle occupies third place, for in the figures given for Port Adelaide the mail steamers are reckoned twice over, as at Melbourne. It should be noted in respect to Queensland ports that the tonnage of vessels is recorded at every port of call, and on this account the towns north of Brisbane also appear more important than they really are.

Port.	Entered.		Cleared.	
	Shipping.	Trade.	Shipping.	Trade.
	tons.	£	tons.	£
Sydney	2,027,951	13,778,148	1,669,654	15,696,631
Newcastle	727,834	420,138	1,048,400	1,415,826
Melbourne	2,062,809	10,143,256	2,021,204	13,530,685
Brisbane	406,050	2,882,893	396,280	2,047,154
Townsville	303,811	715,818	316,159	2,146,825
Port Adelaide	1,300,189	3,295,614	1,237,522	4,602,191
Port Pirie	111,166	338,827	118,348	1,024,129
Albany	648,439	273,308	640,129	131,984
Fremantle	115,289	2,874,500	76,765	626,561
Hobart	302,588	488,935	295,868	533,976
Launceston	111,004	494,086	111,747	643,869
Wellington	203,078	1,580,802	165,559	1,140,354
Auckland	267,983	1,592,558	215,501	1,302,075

The progress of the shipping trade of Sydney has been very uniform, the increase from the year 1860 being at an average rate of about 6 per cent. per annum. The vessels registered as entering the port of Sydney considerably exceed in tonnage those clearing. To account for this difference it is only necessary to state that vessels leaving Sydney for Newcastle for the purpose of shipping coal are reckoned as departures from Newcastle, and not from Sydney. For this reason the clearances of Newcastle uniformly exceed the arrivals, as will be noticed in the subsequent table. The practice of clearing vessels at both ports at one time obtained, but has been abandoned for many years, and vessels are now cleared at the port which they last leave. The following statement shows the shipping entered and cleared at both Sydney and Newcastle for quinquennial periods from 1870 to 1890, and for consecutive years since the latter date. It will be seen that the tonnage of Sydney doubled itself from 1870 to 1880, and from 1880 to 1890, but during the last five years the total increase has only been 23 per cent. :—

Year.	Sydney.		Newcastle.	
	Entered.	Cleared.	Entered.	Cleared.
	tons.	tons.	tons.	tons.
1870	385,616	364,758	283,091	383,242
1875	590,700	468,423	510,902	573,626
1880	827,738	641,996	400,598	516,480
1885	1,608,169	1,283,888	452,946	722,865
1890	1,644,589	1,356,632	625,398	842,180
1891	1,934,556	1,535,306	704,306	1,140,536
1892	1,896,677	1,594,108	729,167	1,024,318
1893	1,902,265	1,585,857	524,844	842,363
1894	1,959,435	1,612,179	721,931	1,035,930
1895	2,027,951	1,669,654	727,834	1,048,400

The comparative importance of the trade of Sydney may be realised by viewing it in connection with the trade of the chief ports of the United Kingdom. It will be observed that in absolute tonnage Sydney is surpassed by only five English ports—London, Liverpool, Cardiff, Hull, and Newcastle; though in point of value the trade of Sydney exceeds that of any port in Great Britain—London, Liverpool, and Hull excepted. Twenty of the most important ports of the United Kingdom are shown in the following table, and in all cases the tonnage and trade coastwise are omitted. In every case the figures refer to the year 1895 :—

Port.	Entered.		Cleared.	
	Shipping.	Trade.	Shipping.	Trade.
	tons.	£	tons.	£
England—				
London	8,435,676	145,047,445	6,110,325	79,670,881
Liverpool	5,598,341	95,630,489	4,883,199	90,620,396
Cardiff	3,700,615	2,693,314	6,500,510	6,202,887
Newcastle	1,728,506	7,011,161	2,872,902	3,840,669
Hull	2,150,654	25,035,764	1,612,685	19,240,437
Southampton	1,420,531	10,005,638	1,328,393	11,078,286
Bristol	676,884	8,461,293	271,983	1,222,765
Dover	742,940	8,481,800	734,334	2,731,606
Grimsby	763,892	6,504,440	829,837	10,001,388
Harwich	653,718	17,024,480	604,332	5,246,057
Newport	871,886	677,459	1,374,237	1,412,194
Sunderland	730,396	597,117	1,002,552	760,772
North Shields	929,800	486,700	1,518,920	1,261,223
Newhaven	343,087	8,407,837	347,793	2,696,054
Scotland—				
Glasgow	1,184,537	10,438,875	1,911,739	13,406,927
Leith	887,842	10,521,441	750,257	3,792,776
Kirkcaldy	496,753	232,489	771,098	522,334
Grangemouth	597,562	2,298,032	733,576	1,485,429
Ireland—				
Belfast	310,449	3,612,271	176,101	76,806
Dublin	215,822	2,098,302	130,330	147,403
New South Wales—				
Sydney	2,027,951	13,778,148	1,669,654	15,696,631
Newcastle	727,834	420,138	1,048,400	1,415,826

No other seaport of the colony can be compared with either Sydney or Newcastle, though for some time Wollongong has maintained a trade of some consequence, especially in coal; and of late years the importance of Eden, Twofold Bay, has increased. In 1895 the vessels which entered Wollongong direct from places outside the colony were all in ballast, and totalled 68,305 tons; while at Eden the shipping entered amounted to 24,094 tons, and landed goods to the value of £1,119. The shipping cleared at Wollongong had an aggregate tonnage of 94,525, and at Eden 37,187, the value of the export trade at these two ports being respectively £62,606 and £3,760.

The average tonnage of sea-going vessels lying in the port of Sydney is about 80,000 per diem. The daily average at the port of Newcastle is about 35,000 tons. On the day on which the greatest number of ships are in port, in the wool season, the tonnage at Sydney is equal to about 125,000, and that at Newcastle to 84,000. The value of the shipping ordinarily moored or anchored in the port of Sydney may be set down at £2,000,000, and of that in the port of Newcastle at £500,000. The greatest value of shipping afloat in the two ports on any one day was about £4,500,000.

RIVER SHIPPING.

The trade borne by the rivers Murray and Darling varies greatly from year to year, according as they are favourable or otherwise for navigation. The Murray River is navigable during the greater part of each year, but the same cannot be said of the Darling, which as a rule can only be used by shipping during the period from March to September, when its volume is augmented by the flood-waters from the interior of Queensland. For the period over which the records extend both rivers have been navigable, and the tonnage at Wentworth on the Darling, at its confluence with the Murray, and at Moama and other Murray River ports, is given in the following table:—

Year.	Tonnage entered at—	
	Wentworth.	Moama and other Murray Ports.
1886	25,366	17,432
1887	35,392	30,470
1888	22,427	28,339
1889	38,335	29,279
1890	42,637	30,140
1891	37,988	31,753
1892	31,071	28,781
1893	39,888	33,359
1894	47,224	41,403
1895	37,489	40,723

SHIPPING REGISTERED.

During the year 1895, 861 steamers and sailing vessels, representing 102,438 tons net, stood registered in the books of the Custom House, as belonging to the port of Sydney. Of these, 432 were steamers, collectively of 55,170 tons net and 18,981 nominal horse-power. There were 50 sailing vessels registered at Newcastle, their net tonnage being 6,954; and 53 steamers of 1,694 nominal horse-power, and 2,650 net tons. The total tonnage registered in the colony was 112,042, of which 57,820 was steam tonnage, with 20,675 nominal horse-power. These figures are exclusive of lighters, of which there were 50, of a total tonnage of 3,066, registered at Sydney; and 45, with an aggregate tonnage of 4,870, at Newcastle. A fee of 10s. is charged for a lighter's license, which permits the boat to be employed for an indefinite period.

The total tonnage registered in New South Wales for the years shown was:—

Year.	Sailing vessels.			Steamers.			Total.		
	No.	Tons.	Men.	No.	Tons.	Men.	Vessels.	Tons.	Men.
1870	50	8,349	380	14	1,494	89	64	9,843	469
1875	93	12,197	556	37	3,903	286	130	16,100	842
1880	54	7,003	325	20	2,159	168	74	9,162	493
1885	49	4,876	280	50	6,387	394	99	11,263	674
1890	28	6,234	191	21	4,027	278	49	10,261	469
1891	53	9,492	280	40	5,239	351	93	14,731	631
1892	60	3,282	262	46	5,848	458	106	9,130	720
1893	32	5,972	231	33	4,200	288	65	10,172	519
1894	29	4,897	153	19	3,067	140	48	7,964	293
1895	13	1,363	85	13	5,172	186	26	6,535	271

During the year 1895 six vessels, aggregating 214 tons, were sold to foreigners, and in consequence were removed from the registers of this colony. Sales were also made to British subjects of 144 vessels, with a total tonnage of 15,956, which remained on the registers at Sydney and Newcastle.

VESSELS BUILT.

The years 1883 and 1884 were marked by great activity in the construction both of sailing and steam vessels, 50 sailing and 52 steam vessels having been built in 1883, whilst 39 sailing vessels and 64 steamers were built in the subsequent year. Trade then became less active, and the industry showed a tendency to die out. In 1888 it had fallen lower than in any of the preceding years, and there has been little improvement since, the tonnage of sailing vessels built during 1895 being only 481, and of steamers 259, in all 740. The number of vessels built in each of the years shown was :—

Year.	Sailing vessels.		Steamers.		Total.	
	No.	Tons.	No.	Tons.	Vessels.	Tonnage.
1880	29	1,938	12	861	41	2,799
1883	50	1,885	52	5,368	102	7,253
1884	39	2,518	64	5,145	103	7,663
1885	29	800	36	2,992	65	3,792
1886	27	1,339	40	2,637	67	3,976
1887	14	636	16	778	30	1,414
1888	9	304	11	394	20	698
1889	9	204	14	663	23	867
1890	9	394	6	697	15	1,091
1891	27	573	13	767	40	1,340
1892	27	782	10	317	37	1,099
1893	11	563	7	236	18	799
1894	6	466	8	463	14	929
1895	5	481	4	259	9	740

The building of steam vessels during the last ten years was of more importance than that of sailing ships, the tonnage constructed during the period being 7,211 of steam and 5,742 of sailing; but since 1892 the tonnage of the sailing vessels turned out of the yards of New South Wales has exceeded that of the steamers. Schooners and ketches are the principal classes of sailing vessels built in the colony, the general tonnage of each class averaging considerably under 100 tons burden. The growing tendency to supplant sailing vessels by steamers, and the substitution of iron for wood for the frames and hulls of vessels, have given a check to the wooden ship-building industry, which at one time promised to grow to important dimensions. Every kind of timber suitable for the construction of ships is found on the rivers of the coast districts of New South Wales, but as the demand for this description of vessel has not increased, little advantage can be taken of the resources of the colony in this respect.

No reliable data have so far been procurable as to the number and tonnage of vessels built abroad for the New South Wales local trade, but the number must be considerable, and such vessels form an import of large value altogether lost sight of in the Customs returns. Some idea, however, of the large number imported may be gathered from the registration of the tonnage of other than New South Wales built vessels, which for the past ten years has averaged 4,674 tons sailing and 3,887 tons steam per annum.

DOCKS AND WHARFS.

The accommodation provided both by the Government and by private enterprise for the fitting and repairing of ships is equal to the requirements of the trade of the colony. At Sydney there are three graving docks, five floating docks, and three patent slips. At Newcastle there are two patent slips; besides which there are other docking and building yards in different parts of the colony for the convenience of coasters and small craft. The principal docks and slips in Sydney, as well as their leading dimensions and the size of vessel they will carry, are shown in the following table:—

Name of Dock.	Where situated.	Length of Keel.	Breadth	Draught of vessel taken.	Lifting power of patent slip or dock.
Graving docks—		ft.	ft.	ft. in.	tons.
Fitzroy (Government)..	Cockatoo Island ...	450	59	21 6	...
Sutherland „ ...	„ „ ...	600	84	32 0	...
Mort's	Balmain	415	66 at top, 54 bot'm.	19 0	...
Floating docks—					
Goodall's	Johnston's Bay ..	90	28	7 3	120
Rountree's	Waterview Bay ...	160	42	12 0	474
Atlas Company's	Woolwich............	250	40	14 0	1,200
Jubilee (Mort's)	Johnston's Bay ...	317	55	15 0	1,500
Drake's.....................	White Bay	150	60	7 6	500
Patent slips—					
Mort's No. 1	Balmain	270	30	11 ft. forward, 17 ft. aft.	2,000
„ No. 2	„	200	25	10 ft. forward, 16 ft. aft.	1,000
„ No. 3	„	80	13 ft. 8 in.	5 3	40

All the necessary tools and appliances for the repairing of ships are found in the dockyards. The Sutherland Graving Dock at Cockatoo Island, the property of the Government, is one of the largest single docks in the world, and is capable of receiving vessels drawing 32 feet of water. During the year 1895, 156 vessels, of which 19 were British ships of war, were docked at Cockatoo Island, 86 being repaired in the Fitzroy Dock, and 70 in the Sutherland Dock, the gross tonnage of the vessels being 132,495. The dock receipts for the twelve months amounted to £3,980, and the expenditure to £2,077, exclusive of interest on cost of construction.

For natural facilities for shipping Sydney stands unrivalled. The water deepens abruptly from the shores, so that the largest vessels may be berthed alongside the wharfs and quays. The Government hold the shores of Sydney Cove, along the margin of which magnificent echelon wharfs have been constructed, which are capable of berthing vessels of 7,000 tons register. The depth of water at low tide ranges between 28 and 30 feet, and the wharfs have an available frontage of 5,620 feet. A large part of the wharfage at Pyrmont and Darling Harbour, and Cowper Wharf at Woolloomooloo Bay, are also in the hands of the State, and are fitted with steam cranes and other appliances for the speedy discharge of the largest ships constructed. The appliances for handling cargo on the Pyrmont wharfs, which are 3,500 feet in length, consist of four steam cranes of ten tons each, and on all the jetties the railway line is laid down to the water's edge. The Government wharfs at Darling Harbour are 4,000 feet in length, and are fitted with one steam crane of ten tons. Cowper Wharf, at Woolloomooloo Bay, is 3,000 feet in length, and also contains excellent accommodation for large vessels. At Blackwattle Bay there is a Government wharf 1,400 feet in length. The wharfage frontage in Port Jackson belonging to the Government is about 17,520 feet. Powerful shipping appliances and roomy stores, as well as electric lighting, are to be found on all the important wharfs. The total frontage of the public and private wharfs amounts to about 7 miles.

Newcastle is also a well-equipped port, where vessels of 4,000 tons can be safely berthed; and every modern steam and hydraulic appliance for loading coal is found on its wharfs. The Government owns nearly all the wharfage, which extends over a length of about 11,580 feet. The total length of the Bullock Island wharf is 7,760 feet, in addition to which there are four ballast jetties 50 feet long and 200 feet apart. 5,550 feet of the wharf is used for the shipment of coal. There are 12 hydraulic cranes of from 9 to 25 tons, each capable of shipping 1,000 tons of coal in twenty-four hours; and 3 steam cranes of 15 tons. It is proposed to spend £150,000 immediately in further increasing the shipping facilities at Bullock Island. On the town side of the harbour there are 3,607 feet of Government wharfs, extending in a continuous line, 2,130 feet being set apart for cargo berths for deep-draught vessels, 977 feet for timber and general cargo for light-draught vessels, and 500 feet for passenger steamers. The wharf at Stockton is 600 feet long, all of which is used for the shipment of coal, with one 15-ton steam crane and one shoot. In addition to the appliances mentioned, there are seven private shoots for the loading of coal. By the port regulations, steamers are required to receive coal at the steam cranes on Bullock Island at the rate of 500 tons per day, and at the rate of 600 tons at the hydraulic cranes. Sailing vessels are expected to receive at least 400 tons per day from the steam cranes, and 600 tons per day from the hydraulic cranes. It is estimated that 28,800 tons of coal per day can be shipped at Newcastle when all the appliances belonging to the Government and private companies are brought into use. There are also two slips owned by private individuals, capable of taking up vessels of 300 and 1,200 tons respectively. Staiths, cranes, and other coal-shipping appliances have been erected at Wollongong, Bulli, Coal Cliff, and other ports. Private as well as Government wharfs are found at all the chief centres of population along the rivers of the colony, and all ports with a trade of any importance have their jetties and shipping facilities.

The revenue derived from public wharfs at Sydney, Newcastle, and Wollongong in 1895 was £62,619, of which sum Sydney contributed £51,394, made up of £6,972 for tonnage dues, and £44,422 for wharfage dues, rent, etc.; Newcastle, £8,692 for tonnage dues, no wharfage rates being collected at this port; and Wollongong, £2,533, viz., £262 for tonnage dues, and £2,271 for wharfage dues, rent, etc. The amount shown as collected for wharfage dues at Sydney includes some small items received at Coff's Harbour, Woolgoolga, and Byron Bay.

LIGHTHOUSES.

The coast of New South Wales is well provided with lighthouses, the number at the end of 1895 being 23, besides which there were 17 leading lights and light-ships for the safety of harbour navigation. The cost of erecting the lighthouses was £199,467, in addition to which a sum of £32,106 was spent on lanterns, making a total expenditure of £231,573 on construction and equipment. The South Solitary Island lighthouse cost the largest sum to construct, namely, £31,259, exclusive of the amount paid for the lanterns. The Macquarie revolving light, on the South Head of Port Jackson, is one of the most powerful lights in the world, and is visible 25 miles at sea.

SHIPWRECKS.

The coast of New South Wales is free from any source of danger to vessels navigating it, and where reasonable precautions were taken wrecks have been very rare. There are only two lifeboat stations on the coast, one at the Sydney Heads, and the other at Newcastle; but the whaleboats at the various pilot stations have been fitted with cork linings, and otherwise made useful for the work of rescue, in which many of them have been of excellent service. The steam tugs subsidised by the Marine Board for the towing of ships in and out of port, are also available for the purpose of rendering assistance to vessels in distress; and life-saving appliances are kept at certain places along the coast. The majority of losses have been amongst vessels under 100 tons burden. During the year 1895 there were 10 wrecks within the jurisdiction of New South Wales, the total tonnage of the vessels being 3,913, and their value, including cargoes, exclusive of the barque "Durisdeer," for which particulars are not known, £76,595. Sixty-three lives were lost out of a total of 131. The largest vessel which met with disaster was the steamer "Catterthun," 2,179 tons, which struck the Dangers, in the vicinity of Seal Rocks, and foundered. Fifty-five lives were lost out of a total of 81 on board. The "Catterthun" carried a general cargo, included in which were a number of boxes of sovereigns. The bulk of the specie was recovered twelve months after the wreck, and it is claimed that the deepest sea-diving on record took place on this occasion, the gold being found at a depth of 26½ fathoms. The barque "Durisdeer," 989 tons, in ballast, drifted ashore at Stockton through the parting of the tug's hawsers, but no lives were lost. The only other vessel over 100 tons burden which was wrecked during 1895 was the barque "Gem," 459 tons, carrying a cargo of coal. She sprung a leak while being towed, and foundered a few miles north of Port Jackson Heads. Two lives were lost out of seven on board.

The following statement shows the number of vessels which were wrecked on the coast of New South Wales, or otherwise within the jurisdiction of the colony, during the ten years 1886–95 :—

Year.	Under 50 tons.	50 to 100.	100 to 200.	200 to 300.	300 to 400.	400 to 500.	Over 500 tons.	Total.	Lives Lost.
1886	6	5	7	1	1	...	3	23	111
1887	4	5	2	1	...	...	1	13	2
1888	6	2	3	1	1	1	1	15	8
1889	4	8	5	2	...	...	1	20	4
1890	3	6	2	1	1	...	3	16	31
1891	3	10	3	...	...	1	1	18	47
1892	4	5	2	...	...	...	...	11	16
1893	4	3	6	1	1	...	...	15	4
1894	5	10	1	...	1	...	1	18	10
1895	3	4	...	...	...	1	2	10	63

During the year 1895 the Marine Board of New South Wales, sitting in Sydney, and the local Board at Newcastle, held seventeen inquiries. Seven masters were examined for the loss of vessels, five being exonerated and the certificates of two suspended—one for a period of three months, and the other for six months. Six inquiries into collisions were also conducted, three masters being reprimanded, and the certificates of three suspended. One inquiry was held into the grounding of a vessel, the master and chief officer of which were reprimanded. Three inquiries were held into the supposed loss of missing ships.

DREDGING FLEET.

To keep open and improve the harbours and coastal rivers the Works Department in 1895 had employed 4 double (one of which only worked one ladder), and 8 single ladder dredges, with an attendant fleet of 32 punts having an aggregate tonnage of 8,880; 18 grab dredges, with 34 punts; and 8 sand-pump or suction dredges. Besides the dredging plant there were 25 tugs, of sizes varying from 5 tons to 390 tons, employed towing punts to sea, and on other service appertaining to dredging operations. The work done and the cost for the year 1895 for each class of dredge were :—

Class of Dredges.	Tons Dredged.	Hours Dredging.	Expenditure.				
			Dredging only.			Dredging and Towing.	
			Total.	Per ton.	Per hour.	Total.	Per ton.
			£	pence.	£ s. d.	£	pence.
Ladder	3,980,125	21,698	38,685	2·33	1 15 8	55,225	3·33
Grab	859,592	30,209	14,881	4·15	0 9 10	17,497	4·88
Sand Pump ...	2,553,664	11,705	23,170	2·17	1 19 7	23,556	2·21
Total	7,393,381	63,612	76,736	2·49	1 4 1	96,278	3·12

The material dredged consisted for the most part of sand and mud, but stiffer material was raised by some of the dredges. The details show that while the average cost of dredging by ladder dredges was 2·33d. per ton, about one-third of the total raised cost not more than 1·57d., and excluding exceptional cases the most expensive dredging was at the rate of 3·48d. The cost of raising material by grab dredges was on an average 4·15d. per ton, the least cost being 1·99d. for sand and mud. A considerable quantity of rock and boulders was removed by these dredges, otherwise the average cost would not have been higher than 3·58d. per ton. The sand-pump dredges, eight in number, removed 2,553,664 tons during 11,705 hours, at the rate of 218 tons for each dredge per hour, the average cost being £1 19s. 7d. an hour, or 2·17d. per ton.

The cost of dredging in New South Wales compares very favourably with that in other countries. Comparing the work done at the mouth of the Hunter River at Newcastle with dredging on the Clyde, below Glasgow, it is found that the cost of lifting soft material by ladder dredges of equal power was in the former case 1·57d. per ton, and in the latter, 2·06d.; at Sydney, where the material removed was sand, mud, and sewage, the cost was 1·74d.—a satisfactory result, especially when it is considered that wages are twice as high in the colony as in Great Britain, and chandlery and other stores are dearer.

FARES AND FREIGHTS.

Looking at the extensive passenger traffic and shipping trade of New South Wales, it would naturally be expected that a liberal scale of fares and freights would be in force, and this will be found actually to exist. In many instances, indeed, the intercolonial rates have been extremely low, owing to the keen competition among the various steamship companies. The following figures will give an idea of the average passenger rates during 1895:—

Ports.	Fares. First Class.	Fares. Second Class.
	£ s. d.	£ s. d.
NEW SOUTH WALES PORTS.		
Bateman's Bay	1 0 0	0 10 0
Bellinger River	2 0 0	1 0 0
Byron Bay	2 0 0	1 0 0
Clarence River	2 0 0	1 0 0
Eden	1 10 0	0 15 0
Macleay River	1 10 0	0 15 0
Manning River	1 5 0	0 15 0
Nambucca River	1 10 0	0 15 0
Newcastle	0 7 0	0 4 0
Port Macquarie	1 10 0	0 15 0
Ballina	2 0 0	1 0 0
Lismore	2 5 0	1 2 6
Ulladulla	0 15 0	0 10 0
Wollongong	0 4 0	0 2 6
VICTORIAN PORT.		
Melbourne	2 0 0	0 15 0
QUEENSLAND PORTS.		
Burketown	15 5 0	7 0 0
Bowen	6 15 0	2 15 0
Brisbane	2 0 0	0 15 0
Bundaberg	3 10 0	1 5 0
Cairns	7 12 6	3 15 0
Cooktown	9 0 0	4 10 0
Mackay	6 0 0	2 10 0
Maryborough	3 0 0	1 5 0
Mourilyan Harbour	7 12 6	3 7 6
Normanton	13 10 0	6 10 0
Rockhampton	5 0 0	1 15 0
Townsville	6 15 0	2 10 0
Thursday Island	12 15 0	6 0 0
SOUTH AUSTRALIAN PORTS.		
Adelaide	3 10 0	1 10 0
Port Pirie	3 10 0	2 0 0
Port Darwin (Northern Territory).	18 0 0	9 0 0
WESTERN AUSTRALIAN PORTS.		
Albany	8 0 0	4 15 0
Perth (Fremantle)	8 0 0	4 15 0
TASMANIAN PORTS.		
Hobart	2 10 0	1 0 0
Launceston	2 10 0	1 5 0

Ports.	Fares. First Class.	Fares. Second Class.	Fares. Third Class.
	£ s. d.	£ s. d.	£ s. d.
NEW ZEALAND PORTS.			
Auckland	4 0 0	2 5 0	....
Dunedin (via Cook Strait)	5 10 0	3 5 0	....
Lyttleton " "	4 15 0	2 15 0	....
Napier (via Auckland)	5 10 0	3 5 0	....
Wellington	4 0 0	2 5 0	...
EUROPEAN PORTS.			
Antwerp	57 0 0	32 0 0	14 0 0
Bremen	57 0 0	32 0 0	14 0 0
Brindisi	£55 to £65	£32 to £37	£14 14 to £17 17
Genoa	52 0 0	30 0 0	13 10 0
London	£60–£70	£32 to £44	£14 to £22/12/9
Marseilles	65 0 0	40 0 0	20 0 0
Naples	£50–£65	£30 to £37	....
Southampton	57 0 0	32 0 0	14 0 0
Venice	£55–£65	35 0 0	....
EASTERN PORTS.			
Aden	45 0 0	£30 to £38	£8 10-£15
Bombay	40 0 0	25 0 0	13 10 0
Calcutta	40 0 0	25 0 0	13 10 0
Colombo	40 0 0	25 0 0	10 0 0
Hong Kong	33 0 0	23 0 0	....
Java	27 0 0	....	10 10 0
Penang	30 10 0	....	15 15 0
Port Moresby	22 10 0	14 0 0	....
Shanghai	37 10 0	26 0 0	18 0 0
Singapore	38 0 0	27 0 0	18 0 0
Mauritius	52 0 0	35 12 0	17 16 0
Port Said	£53–£63	£31 to £36	16 16 0
Reunion	51 0 0	35 0 0	17 12 0
Yokohama	39 15 0	27 0 0	....
PACIFIC PORTS.			
Aneityum	10 10 0	6 0 0	....
Fiji (Suva and Levuka)	12 10 0	7 10 0	....
Havannah (New Hebrides)	12 0 0	7 0 0	....
Honolulu	30 0 0	12 0 0	....
Noumea	10 0 0	7 0 0	3 12 0
Samoa Islands	20 0 0	10 0 0	....
San Francisco	40 0 0	16 0 0	....
Tonga Islands	16 0 0	9 10 0	4 10 0
Vancouver	40 0 0	16 0 0	....
SOUTH AFRICAN PORT.			
Cape Town	35 0 0	....	16 0 0

Fares by sailing vessels are in nearly every instance a matter of private arrangement between the captain of the vessel and the intending passenger, but the number of such passengers is becoming smaller from year to year owing to the great decrease in steamer fares. Fares from Sydney to London are, however, given as £35 to £45 first class, and £18 to £22 second class; and from Newcastle to San Francisco as £20 to £25.

The freights paid for the carriage of wool to London determine, within certain limits, the freight of most other produce. The present average cost of carriage of greasy wool to London is $\frac{11}{32}$d. per lb.; in 1834 the average was somewhat over 3d. Information regarding freights is not available for early years, but since 1857, as the following figures show, the freights on pressed greasy wool have fallen 45 per cent. The values are in every case for sailing ships, as the practice of shipping wool by steamers was by no means general until very recent years.

Year.	Freight per lb.	Year.	Freight per lb.	Year.	Freight per lb.
1857	$\frac{5}{8}$d.	1870	$\frac{3}{8}$d.	1883	$\frac{1}{2}$d.
1858	$\frac{3}{8}$d.	1871	$\frac{5}{8}$d.	1884	$\frac{3}{8}$d.
1859	$\frac{3}{8}$d.	1872	$\frac{5}{8}$d.	1885	$\frac{3}{8}$d.
1860	$\frac{5}{8}$d.	1873	$\frac{5}{8}$d.	1886	$\frac{3}{8}$d.
1861	$\frac{5}{8}$d.	1874	$\frac{5}{8}$d.	1887	$\frac{3}{8}$d.
1862	$\frac{5}{8}$d.	1875	$\frac{3}{8}$d.	1888	$\frac{7}{16}$d.
1863	$\frac{5}{8}$d.	1876	$\frac{1}{2}$d.	1889	$\frac{7}{16}$d.
1864	$\frac{5}{8}$d.	1877	$\frac{3}{8}$d.	1890	$\frac{7}{16}$d.
1865	$\frac{1}{2}$d.	1878	$\frac{7}{16}$d.	1891	$\frac{7}{16}$d.
1866	$\frac{5}{8}$d.	1879	$\frac{1}{2}$d.	1892	$\frac{11}{24}$d.
1867	$\frac{3}{4}$d.	1880	$\frac{11}{16}$d.	1893	$\frac{13}{23}$d.
1868	$\frac{9}{16}$d.	1881	$\frac{7}{8}$d.	1894	$\frac{13}{32}$d.
1869	$\frac{1}{2}$d.	1882	$\frac{3}{8}$d.	1895	$\frac{11}{32}$d.

The following table of freights calls for no particular comment, as prices have remained fairly uniform for several years, except when slightly affected by temporary causes :—

Year.	Vessel.	Per lb.	Per ton weight.			Per ton measurement (40 cubic feet).	
		Wool (Greasy).	Tallow.	Leather.	Hides.	Preserved Meats.	Measurement Goods.
1886	Sailing	$\frac{5}{16}$d. to $\frac{3}{8}$d.	20/- to 25/-	30/- to 35/-	15/-	25/-	25/-
	Steam	$\frac{3}{8}$d. to $\frac{3}{4}$d.	30/-	30/- to 70/-	17/6	30/- to 70/-	30/- to 70/-
1887	Sailing	$\frac{5}{16}$d. to $\frac{3}{8}$d.	22/6 to 30/-	30/- to 35/-	15/- to 20/-	25/-	25/-
	Steam	$\frac{3}{8}$d. to $\frac{5}{8}$d.	30/- to 45/-	40/- to 50/-	....	....	25/- to 45/-
1888	Sailing	$\frac{5}{16}$d. to $\frac{7}{16}$d.	25/- to 45/-	30/- to 45/-	20/-	25/- to 30/-	25/- to 30/-
	Steam	$\frac{1}{2}$d. to $\frac{3}{4}$d.	30/- to 52/6	35/- to 50/-	....	30/-	60/-
1889	Sailing	$\frac{5}{16}$d. to $\frac{7}{16}$d.	25/- to 45/-	27/6 to 45/-	15/- to 20/-	22/6	20/- to 25/-
	Steam	$\frac{1}{2}$d. to $\frac{3}{4}$d.	25/- to 50/-	40/- to 60/-	....	....	....
1890	Sailing	$\frac{3}{8}$d. to $\frac{1}{2}$d.	32/6 to 47/6	35/- to 45/-	15/- to 25/-	25/- to 30/-	25/- to 35/-
	Steam	$\frac{1}{2}$d. to $\frac{7}{8}$d.	35/- to 50/-	45/- to 60/-	....	30/-	60/-
1891	Sailing	$\frac{1}{4}$d. to $\frac{7}{16}$d.	26/- to 45/-	27/6 to 40/-	20/- to 30/-	17/6 to 25/-	22/6 to 45/-
	Steam	$\frac{5}{16}$d. to $\frac{3}{4}$d.	32/6 to 45/-	32/6 to 50/-	30/- to 35/-	....	32/6 to 60/-
1892	Sailing	$\frac{3}{8}$d. to $\frac{9}{16}$d.	27/6 to 37/6	27/6 to 40/-	15/- to 22/6	20/- to 27/6	27/6 to 40/-
	Steam	$\frac{3}{8}$d. to $\frac{3}{4}$d.	45/- to 50/-	40/- to 60/-	35/-	32/6 to 40/-	40/- to 60/-
1893	Sailing	$\frac{5}{16}$d. to $\frac{1}{2}$d.	25/- to 40/-	25/- to 40/-	15/- to 22/6	15/- to 17/6	25/- to 40/-
	Steam	$\frac{3}{8}$d. to $\frac{5}{8}$d.	35/- to 50/-	35/- to 60/-	30/- to 40/-	30/-	40/- to 60/-
1894	Sailing	$\frac{3}{8}$d. to $\frac{7}{16}$d.	32/6 to 37/6	32/6 to 40/-	17/6 to 20/-	17/6	25/- to 30/-
	Steam	$\frac{3}{8}$d. to $\frac{1}{2}$d.	40/- to 50/-	35/- to 50/-	30/-	25/- to 30/-	35/- to 50/-
1895	Sailing	$\frac{5}{16}$d. to $\frac{3}{8}$d.	17/6 to 35/-	30/- to 40/-	15/- to 22/6	15/- to 17/6	20/- to 35/-
	Steam	$\frac{5}{16}$d. to $\frac{1}{2}$d.	22/6 to 40/-	35/- to 65/-	25/- to 40/-	20/- to 30/-	30/- to 45/-

COMMERCE.

THE Collector of Customs administers affairs relating to Customs and Excise, and receives all revenue derived from the charges on shipping, except the fees of the Marine Board, and the moneys received from the public wharves. A Board, consisting of three Commissioners, exists for the purpose of determining disputes between the general public and the officers of the department, but its decisions may be disallowed by the Governor or appealed against to the Supreme Court, with final reference to the Privy Council.

The coastal trade of the colony may be conducted under one of two systems—either the captain of a vessel may obtain a document, called a "Transire," permitting his ship to engage in the local carrying trade for a period of three months, or he may enter the particulars of his cargo in a book kept for that purpose, and have the entries initialled at the Custom House every voyage. It is not necessary to pass entries for goods shipped from one port of the colony to another, although, of course, excisable articles are carried under a bond certificate. With regard to merchandise destined for or received from abroad, a different course of procedure is adopted. A declaration must be made to the Customs of the quantities and values of all imports, except such goods as have been brought into port for transhipment, of which only a description of the packages is entered, there being no law in existence requiring merchants to supply the quantities and values of such goods. Of articles which are subject to specific duties, the values declared by the importers are understood to be the values at the port of shipment, with packing, freight, insurance, and all other charges added. The declared values of the goods are checked, and, where wrongly stated, amended by the Customs officials. Dutiable articles may be reintroduced to the colony under reintroduction certificates, which are issued by the Customs Department for the port or border station at which it is desired to reintroduce the goods. All goods seized by the Customs are submitted to auction sale, and if they do not realise the amount of duty leviable on them they are withdrawn and destroyed.

The entries for imports passed at the Customs do not in every case show the countries from which the goods have actually come, but usually the places at which they were shipped. This is an imperfection incidental to all Customs statistics, which in the present method of conducting trade cannot be avoided. The desirability of recording the actual place of origin is admitted, and the Customs officers go so far as to alter the entries where the nature of the goods clearly shows that they have arrived from another country than the one stated. In like manner the exports of the colony are in many cases cleared for other countries than those for which they are ultimately destined, and it is estimated that some £4,280,000 of goods in transit to Europe are credited in the Customs to Victoria and South Australia.

Although goods transhipped at Sydney and other ports are not included in the trade returns of the colony, in some of the provinces to which they are forwarded they are treated as exports of New South Wales, and there is in consequence a discrepancy between the interchange figures published in this colony and those of the other colonies where the practice mentioned prevails. Dutiable articles carried by vessels for use or consumption on board are, however, classed as exports here when the vessels clear, but no account is taken of goods on the free list. The quantities and values of exports are not, as in the case of the imports, obtained under declaration, but the Collector of Customs has power to adopt this form of procedure should he think it advisable to do so. The values given in the returns represent the values of the goods at the place of shipment in the colony, and are checked by the Customs officers with the prices ruling from day to day in the local markets.

Increase of Trade.

The value of goods imported into and exported from New South Wales has increased during the seventy years over which the records extend, from £400,000 in 1825 to £37,927,200 in 1895. The yearly values have been somewhat uncertain in their increase, the imports from 1840 to 1852 being especially erratic; but of late years the progress of the colony, as evidenced by its trade, has been remarkably steady, the largest falling off in any year being that experienced in 1892. The gross value of the exports from year to year, for the reasons hereafter pointed out, forms the surest index of the progress of a country circumstanced like New South Wales, and the result of a rise or fall in the value of the staple commodities, or of a depression in production, may be readily traced in the corresponding rise or fall in the export values. The amount of the trade of the colony, for the several periods shown, was :—

Year.	Imports.	Exports.	Total Trade.	Year.	Imports.	Exports.	Total Trade.
	£	£	£		£	£	£
1825	300,000	100,000	400,000	1890	22,615,004	22,045,937	44,660,941
1830	420,480	141,461	561,941	1891	25,383,397	25,944,020	51,327,417
1840	3,014,189	1,399,692	4,413,881	1892	20,776,526	21,972,247	42,748,773
1850	2,078,338	2,399,580	4,477,918	1893	18,107,035	22,921,223	41,028,258
1860	7,755,859	6,311,351	14,067,210	1894	15,801,941	20,577,673	36,379,614
1870	8,284,378	8,030,578	16,314,956	1895	15,992,415	21,934,785	37,927,200
1880	14,176,063	15,682,802	29,858,865				

The following table shows the total value of the trade of New South Wales with each of the principal countries during the year 1895 :—

COUNTRIES.	Total Imports therefrom.	Exports thereto.			Total Trade.
		Domestic Produce or Manufacture.	Other Produce or Manufacture.	Total.	
AUSTRALASIAN COLONIES :—	£	£	£		£
Victoria	1,499,592	2,730,676	347,341	3,078,017	4,577,609
Queensland	4,011,776	242,412	1,173,845	1,416,257	5,428,033
South Australia	911,170	2,181,723	132,959	2,314,682	3,225,852
Western Australia	32,332	48,387	95,018	143,405	175,737
Tasmania	303,270	43,405	109,046	152,451	455,721
New Zealand	563,528	176,488	309,685	486,173	1,049,701
Total, Australasian Colonies	7,321,668	5,423,091	2,167,894	7,590,985	14,912,653
UNITED KINGDOM	6,420,107	7,059,532	2,311,886	9,371,418	15,791,525
OTHER BRITISH POSSESSIONS :—					
Canadian Dominion	61,742	10,998	5,806	16,804	78,546
Ceylon	94,595	1,500	555	2,055	96,650
Fiji	27,890	20,782	65,638	86,420	114,310
Hong Kong	181,529	15,929	126,047	141,976	323,505
India	212,337	53,762	645	54,407	266,744
Straits Settlements	14,074	24,079	428	24,507	38,581
Mauritius	12,950	24,071	84	24,155	37,105
Other British Possessions	5,904	4,124	6,255	10,379	16,283
Total, Other British Possessions	611,021	155,245	205,458	360,703	971,724
FOREIGN COUNTRIES :—					
Belgium	150,288	687,984	92,842	780,826	931,114
China	133,870	7,869	74	7,943	141,813
France	76,663	1,210,101	226,021	1,436,122	1,512,785
Germany	425,697	991,387	150,274	1,141,661	1,567,358
Italy	39,563	40,144	23,365	63,509	103,072
Japan	28,179	50,277	3,965	54,242	82,421
New Caledonia	28,345	28,822	42,522	71,344	99,689
South Sea Islands and New Hebrides	54,436	14,187	54,526	68,713	123,149
United States	624,268	507,893	175,713	683,606	1,307,874
Other Foreign Countries	78,310	259,678	44,035	303,713	382,023
Total, Foreign Countries	1,639,619	3,798,342	813,337	4,611,679	6,251,298
General Total	15,992,415	16,436,210	5,498,575	21,934,785	37,927,200

Of the total trade shown above, nearly five-sixths are sea-borne, the remaining sixth comprising the overland trade with the three bordering colonies of Queensland, South Australia, and Victoria. Nearly the whole of the seaward trade is monopolised by the ports of Sydney and Newcastle, the trade of the other seven ports amounting to less than £85,000, and of this amount three-fourths belong to the port of Wollongong. The distribution of the overland trade is much more equal, as the table given below will illustrate. The value of the overland trade with Victoria during 1895 was £2,675,031; that with South Australia came to £2,757,096; and the Queensland overland trade was worth £1,099,370. Wool and live stock formed the bulk of this traffic with Victoria and Queensland, as it did until recent years with South Australia also, but since the development in 1886 of the mines in the Barrier district, the chief elements of export have been silver bulli-lead, and ore; and the imports, general merchandise for Broken Hill. The appended table shows the trade of each of the ports and border stations of the colony during 1895. Some of the latter—Wilcannia and Bourke, for instance—are situated at a considerable distance from the actual border.

Port or Station.	Imports.	Exports. New South Wales Produce.	Exports. British and Foreign Produce.	Exports. Total.	Total Trade.
	£	£	£	£	£
		Seaward.			
Sydney	13,778,148	10,653,040	5,043,591	15,696,631	29,474,779
Clarence River (Grafton)	5,127	5,800	....	5,800	10,927
Eden	1,119	3,745	15	3,760	4,879
Newcastle	420,138	1,412,319	3,507	1,415,826	1,835,964
Port Macquarie	....	815	....	815	815
Port Stephens	....	361	....	361	361
Richmond River (Ballina)	1,680	320	....	320	2,000
Tweed River	2,835	27	510	537	3,372
Wollongong	....	62,606	....	62,606	62,606
Total ....£	14,209,047	12,139,033	5,047,623	17,186,656	31,395,703
		Overland.			
Albury	184,563	411,290	6,705	417,995	602,558
Barringun	218,129	15,968	10,398	26,366	244,495
Boggabilla	24,890	30,361	....	30,361	55,251
Bourke (Inland)	1,996	....	7,280	7,280	9,276
Brewarrina (Inland)	....	6	12	18	18
Cobram	10,596	38,650	....	38,650	49,246
Corowa	42,884	195,391	2,522	197,913	240,797
Delegate	63	....	....	....	63
Euston	3,147	53,292	....	53,292	56,439
Howlong	7,419	16,899	....	16,899	24,318
Moama	259,261	667,479	1,858	669,337	928,598
Mulwala	27,981	95,888	367	96,255	124,236
Swan Hill	9,684	478,314	....	478,314	487,998
Tocumwal	19,761	69,000	....	69,000	88,761
Tweed Heads	4,450	200	....	200	4,650
Wallangarra	149,449	29,635	377,272	406,907	556,356
Wentworth	48,641	243,542	694	244,236	292,877
Wilcannia (Inland)	21,034	....	145	145	21,179
Willyama (Broken Hill)	590,197	1,917,245	43,699	1,960,944	2,551,141
Other Crossing-places (Live Stock)	159,223	34,017	....	34,017	193,240
Total ....£	1,783,368	4,297,177	450,952	4,748,12[illegible]	[illegible]
Grand Total...£	15,992,415	16,436,210	5,498,575	21,934,7[illegible]	[illegible]

TRADE OF AUSTRALASIAN COLONIES.

The trade of New South Wales is larger in gross amount than that of any of the other colonies of Australasia, but it is exceeded by the commerce of Western Australia, South Australia, and Queensland in value per head of population. The total trade of each colony for 1880, 1890, and 1895 is given in the following table, and though the last year was one of severe depression, the magnitude of the trade, not only of this colony but of the rest of the group, is very suggestive. It will be seen that the trade of Victoria ranks second in value, and that of the other colonies in the following order :—New Zealand, Queensland, South Australia, Western Australia, and Tasmania.

Colony.	1880.	1890.	1895.
	£	£	£
New South Wales	29,858,865	44,660,941	37,927,200
Victoria	30,511,453	36,220,237	27,020,076
Queensland	6,535,456	13,621,212	14,331,607
*South Australia	11,156,003	17,328,301	12,954,011
Western Australia	852,852	1,546,260	5,107,505
Tasmania	2,881,154	3,384,504	2,467,520
New Zealand	12,514,703	16,072,245	14,950,353
Australasia	94,310,486	132,833,700	114,758,272

* Including Northern Territory.

IMPORTS.

During 1895, the gross value of goods imported into the colony amounted to £15,992,415, or at the rate of £12 12s. 11d. per head; the imports for home consumption were valued at £10,494,642, or £8 6s. per head of the mean population during the year, showing a decrease on the previous year of 2s. 6d. per head of gross imports, and of 13s. 11d. per head of net imports. Since 1891, when the gross imports averaged £22 3s. 11d. and the imports for home consumption £18 19s. 9d., the values per head of population have steadily declined, the figures for 1895 being the lowest reached during the thirty-six years that have elapsed since the colony was restricted to its present boundaries. The falling off is due to two chief causes—first, to the large diminution in public and private borrowings, [illegible] the fall in prices, which has extended to nearly [illegible] the colony imports.

The value of the imports per inhabitant, distinguishing those for home consumption from the total imports, was as follows for the years shown :—

Year.	Imports for home consumption.	Total Imports per head.	Year.	Imports for home consumption.	Total Imports per head.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1870	12 7 8	15 16 6	1889	16 3 10	21 8 9
1875	19 14 10	23 9 11	1890	16 0 8	20 0 6
1880	15 4 9	19 9 0	1891	18 19 9	22 3 11
1885	18 19 8	25 12 0	1892	13 19 2	17 11 7
1886	16 2 3	21 19 8	1893	10 2 11	14 19 2
1887	13 10 8	19 1 7	1894	8 19 11	12 15 5
1888	13 16 2	20 9 11	1895	8 6 0	12 12 11

For the purpose of more readily understanding the nature of the imports, they have been classified under certain leading heads, and during 1895 the value of each class was as shown below :—

Classification.	Total Imports.	Imports for home consumption.
	£	£
Food and beverages, including breadstuffs	2,144,150	1,846,004
Wines, fermented and spirituous liquors	616,529	540,411
Live stock	528,156	495,525
Animal and vegetable products, including wool	3,024,966	1,110,957
Clothing and textile fabrics	3,750,422	3,442,157
Minerals and metals, raw or partly worked up, including silver bullion, lead, and ore	1,014,350	722,058
Coal and coke	29,364	29,364
Specie and gold bullion	2,089,478	....
Articles of education, art, amusement	624,574	529,151
Manufactured articles not elsewhere included	1,770,897	1,454,749
Unclassified articles	399,529	324,266
Total value ......£	15,992,415	10,494,642

The import of coal and coke during 1895, amounting to £29,364 as shown above, consisted almost entirely of coke required for smelting purposes at Broken Hill.

During 1895 the colony imported food and drink for its own consumption to the value of £2,386,415, or at the rate of £1 17s. 9d. for each inhabitant, and manufactured goods to the amount of £5,426,057, or at the rate of £4 5s. 10d. per head, together representing £6 3s. 7d. per head, out of a total of £8 6s. The three principal items of the balance are live stock, animal and vegetable products, and minerals and metals raw or partly worked up. Of the animal and vegetable products, as also of the minerals and metals, some portion is worked up in the colony for local requirements; but the greater portion of the gold imported is treated at the Mint, and re-exported in the shape of coin. The value per head of some of the principal articles imported for home consumption during the last five years is given below:—

Articles.	1891.		1892.		1893.		1894.		1895.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Apparel—Wearing, and gloves	24	4	20	5	12	9	12	10	13	9
Beer and ale	6	1	5	7	4	5	3	11	3	4
Boots and shoes	10	2	7	3	5	7	4	4	4	3
Drapery	46	9	32	7	25	1	23	9	28	0
Grain, pulse, etc.—										
Flour	10	5	8	3	3	8	3	4	2	3
Wheat	3	3	3	2	1	3	0	5	0	11
Oats	2	6	2	5	2	6	1	1	1	2
Hardware	10	9	9	11	5	1	2	4	2	8
Iron and steel—										
Manufactured wrought	6	0	4	2	2	10	2	5	3	3
Wire (black and galvanized)	3	1	3	5	1	7	1	5	1	2
Galvanized sheets and bars	5	11	3	11	2	7	2	10	2	0
Live stock—										
Horned cattle	13	3	8	6	8	0	4	9	4	2
Horses	2	10	2	9	1	10	1	9	1	3
Sheep	5	7	3	10	5	0	3	2	2	3
Machinery	8	1	4	2	2	4	2	0	2	5
Paper, books, etc.	6	11	6	5	5	5	5	0	5	7
Spirits	8	6	6	2	5	7	4	8	4	7
Sugar	9	10	7	4	5	9	8	5	6	5
Tea	7	7	5	11	4	10	5	1	4	6
Timber (dressed and rough)	12	8	7	3	5	2	4	6	4	7
Tobacco, cigars, and cigarettes	3	8	3	2	2	3	1	10	2	8

The import of drapery stands first in the list of values, and if wearing apparel be added to it the value of these goods would represent a sum of £2 1s. 9d. per head during 1895, the greatest amount for any one year having been in 1882, when the value imported reached almost £5 for every inhabitant. The value per head in 1895 of iron and steel, machinery, and hardware combined, was 11s. 6d.; intoxicants, 8s. 7d., of which the value of spirits was 4s. 7d. and of beer 3s. 4d.; sugar, 6s. 5d.; tea, 4s. 6d.; paper, books, etc., 5s. 7d.; boots and shoes, 4s. 3d.; and flour, 2s. 3d. None of the other values reach such large figures except those for live stock and timber, though many other articles form individually very important items. Two things are plain from a consideration of this table—the great purchasing power of the people, though now greatly reduced compared with what it was ten years ago, and the very large scope that exists for the production of goods which are now imported, and for the extension of manufactures within the colony. This will, perhaps, be seen more clearly from the gross values of some of the principal articles imported during the year 1895, as given in the following table:—

Apparel, Wearing	£1,085,161	Live stock	£528,156
Arms and ammunition	86,241	Malt and hops	120,512
Beer	234,120	Matches	56,045
Boots and shoes	297,763	Milk, Condensed	59,454
Butter	92,846	Musical instruments	47,172
Candles	43,449	Oils—mineral and vegetable	182,746
Chaff and hay	186,546	Paints, paperhangings, lampware	94,939
Cement	66,152	Paper, books, stationery etc.	334,400
Cutlery and grindery	66,906	Pickles, sauces, and oilmen's stores	59,048
Drapery	2,049,662	Potatoes and other vegetables	158,457
Drugs and apothecaries' ware	138,572	Saddlery and harness and saddler's ware	52,211
Fancy goods and toys	137,368	Silver plate and ware	41,657
Fish, Preserved	65,128	Skins and hides	280,517
Flour	144,666	Spirits	324,315
Fruit, Bottled, dried, and green	244,356	Sugar	485,044
Furniture and upholstery	54,761	Tea	361,699
Glass and glassware	49,039	Timber	304,826
Grain and pulse	244,979	Tinplates	74,574
Hardware	201,404	Tobacco, cigars, and cigarettes	192,759
Iron and iron manufactures and machinery	819,572	Watches and clocks	34,060
Jams and jellies	7,255	Wine	48,400
Jewellery and precious stones	71,203		
Leather	75,681		

The value of the imports into New South Wales, distinguished under the main countries of origin, for 1870 and subsequent periods ending with 1895, was as undernoted:—

Year.	United Kingdom.	Australasian Colonies.	Other British Possessions.	Foreign States.	Total.
	£	£	£	£	£
1870	3,200,706	3,677,927	573,462	882,283	8,284,378
1875	6,062,226	5,878,751	867,252	926,904	13,735,133
1880	6,536,661	5,945,788	539,334	1,154,280	14,176,063
1885	11,885,597	8,595,429	818,689	2,437,746	23,737,461
1886	10,445,980	8,085,584	621,507	2,160,056	21,313,127
1887	7,998,568	9,017,035	549,345	1,606,369	19,171,317
1888	9,212,981	9,085,567	736,224	2,194,505	21,229,277
1889	8,736,478	10,647,312	814,718	2,664,549	22,863,057
1890	8,628,007	10,981,721	663,325	2,341,951	22,615,004
1891	10,580,230	11,127,178	766,947	2,909,042	25,383,397
1892	8,883,983	9,201,193	577,707	2,113,643	20,776,526
1893	7,218,124	8,895,787	565,491	1,427,633	18,107,035
1894	5,983,489	7,794,168	608,356	1,415,928	15,801,941
1895	6,420,107	7,321,668	611,021	1,639,619	15,992,415

The question of the trade with different countries will be returned to later on in this chapter. It may here be pointed out that the Customs returns do not enable goods to be traced to their place of origin—merely to the place where they are shipped. A larger trade is maintained by the colonies with foreign States than would appear from the foregoing table, as the products of these States are sent to Australia by way of Great Britain. The imports set down as coming from the other Australasian colonies include the British and foreign goods introduced into New South Wales overland from Victoria and South Australia.

EXPORTS.

The export trade of New South Wales, like the import, is larger than that of any other Australasian colony. For the reasons which will hereafter appear, until 1890 the exports usually fell short of the imports; but for the last five years this condition of things has been reversed, for the exports exceeded the imports by £560,623 in 1891, £1,195,721 in 1892, £4,814,188 in 1893, £4,775,732 in 1894, and £5,942,370 in 1895. Compared with those of other colonies, the extent of the New South Wales exports of home produce is very satisfactory, as will be evident at a glance at the subsequent table, which shows the total export trade in domestic produce, and the amount per head of the population, of each of the Australian colonies during the year 1895. It will be seen that, in point of value per head of population, New South Wales takes third place in the list:—

Colony.	Total Exports of Domestic Produce.	Per Head of Population.		
	£	£	s.	d.
New South Wales	16,436,210	13	0	0
Victoria	11,615,493	9	16	10
Queensland	8,865,938	19	11	7
South Australia	3,673,893	10	7	0
Western Australia	1,273,638	13	17	11
Tasmania	1,305,160	8	4	0
New Zealand	8,390,153	12	2	4
Australasia £	51,560,485	12	5	9

There is a defect in these figures, as far, at least, as two of the colonies are concerned. Victoria and South Australia have each a large re-export trade, especially in raw produce, and it frequently happens that credit is taken for the produce of other colonies in the returns showing their export of home produce. New South Wales was formerly over-credited with gold received from Queensland for coinage, and is still, to some extent, with tin and copper imported from Queensland and South Australia, and with cattle from the northern colony. To what extent the Customs value of home produce is overstated in Victoria and South Australia is unknown, but much of the New South Wales produce passing through Victoria for shipment to England is exported as Victorian produce, especially wool, of which large quantities shipped from the neighbouring colony as home produce are really the production of New South Wales. How far this system obtains in other directions it is impossible to say.

Dividing the exports of New South Wales into two classes—those which are the produce and manufacture of the colony, and those imported from other countries—the preponderance of home produce exported is very marked. The value of the domestic exports in 1895 was more than twice that in 1872, and, speaking generally, the expansion has been of a steady character. Wool constitutes the largest item of domestic export, and any fluctuation in the production or market value of the staple is plainly marked in the whole trade. The decline in the value of domestic exports between 1880 and 1886, which the following table shows, is to a great extent due to the fall in the price of wool, and to the losses brought about by the succession of dry seasons. The exports of produce other than that of the colony also show a decline about this period, ascribable in part to the causes which affected the general exports, and to the establishment of direct communication between Great Britain and Queensland and Tasmania:—

Year.	Domestic produce exported.		Other produce exported, including gold.	Total Exports.
	Gold.	Commodities.		
	£	£	£	£
1872	1,242,926	5,964,621	3,276,109	10,483,656
1873	1,962,094	7,694,202	3,108,578	12,764,874
1874	577,789	8,408,483	3,471,703	12,457,975
1875	635,448	9,374,156	3,787,793	13,797,397
1876	368,464	9,102,099	3,590,849	13,061,412
1877	663,552	8,880,570	3,913,778	13,457,900
1878	609,121	9,016,558	3,508,726	13,134,405
1879	....	10,079,317	3,052,614	13,131,931
1880	....	12,007,931	3,674,871	15,682,802
1881	710,412	11,244,865	4,352,528	16,307,805
1882	566,516	12,623,435	4,487,404	17,677,355
1883	502,517	15,625,835	4,133,921	20,262,273
1884	73,593	13,989,634	4,514,063	18,577,290
1885	71,539	11,987,741	4,690,827	16,750,107
1886	24,918	11,558,311	4,134,708	15,717,937
1887	34,184	14,206,128	4,281,438	18,521,750
1888	165,540	15,516,852	5,237,738	20,920.130
1889	321,731	17,378,662	5,594,541	23,294,934
1890	137,169	17,095,556	4,813,212	22,045,937
1891	1,296,093	19,789,619	4,858,308	25,944,020
1892	11,486	17,695,616	4,265,145	21,972,247
1893	25,885	17,068,328	5,827,010	22,921,223
1894	325,302	15,579,659	4,672,712	20,577,673
1895	1,063,558	15,372,652	5,498,575	21,934,785

The value of New South Wales produce exported during 1891 largely exceeded that of any other year. As already shown, a portion of the trade would have been transacted in the previous year if the maritime strike had not occurred; but, after allowing freely for the increase due to this circumstance, the value would still have been the largest in the history of the colony. The table just given shows a notable rise in the value of domestic produce exported during 1889, which was well sustained until 1893. This may be attributed in the first place to a fortunate succession of good seasons, and in the second to the production of silver, which became an important article of export in the year named. The large decrease in 1894 is fully accounted for by the fall in prices, the depression preventing such increased production as would have had the effect of sustaining the total export value. In 1895, however, there was a further slight fall, although the average price of the commodities produced in the colony was higher than in the previous year.

In the presentation of the figures relating to the export trade, it will be seen that the value of commodities has been separated from that of gold, the export of gold the produce of the colony being taken to be the excess of the total export of coin over the total import of coin and bullion. Where there was no such excess the whole of the gold exported has been classed as other than domestic produce. Below will be found the value of the trade per inhabitant, the subdivision being the same as that adopted for the previous table :—

Year.	Domestic produce exported.		Other produce exported, including gold.	Total Exports.
	Gold.	Commodities.		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1872	2 7 2	11 6 7	6 4 6	19 18 3
1873	3 12 1	14 2 7	5 14 2	23 8 10
1874	1 0 6	14 18 0	6 3 0	22 1 6
1875	1 1 9	16 0 8	6 9 7	23 12 0
1876	0 12 3	15 1 3	5 18 10	21 12 4
1877	1 1 1	14 2 5	6 4 6	21 8 0
1878	0 18 6	13 14 2	5 6 8	19 19 4
1879	....	14 11 10	4 8 5	19 0 3
1880	....	16 9 7	5 0 10	21 10 5
1881	0 18 7	14 13 11	5 13 10	21 6 4
1882	0 14 2	15 16 2	5 12 5	22 2 9
1883	0 12 0	18 12 10	4 18 8	24 3 6
1884	0 1 8	15 16 10	5 2 2	21 0 8
1885	0 1 7	12 18 7	5 1 2	18 1 4
1886	0 0 6	11 18 6	4 5 3	16 4 3
1887	0 0 8	14 2 9	4 5 3	18 8 8
1888	0 3 2	14 19 8	5 1 2	20 4 0
1889	0 6 0	16 5 11	5 4 11	21 16 10
1890	0 2 6	15 10 4	4 7 4	20 0 2
1891	1 2 8	17 6 1	4 5 0	22 13 9
1892	0 0 2	14 19 7	3 12 2	18 11 11
1893	0 0 5	14 2 0	4 16 4	18 18 9
1894	0 5 3	12 11 10	3 15 6	16 12 7
1895	0 16 10	12 3 2	4 6 11	17 6 11

Judged by the volume of its exports per inhabitant, New South Wales compares favourably with any other country whose commerce is at all considerable, as an export of from £16 to £24 can only be paralleled by some few countries, such as Belgium, whose trade is largely made up of re-exports. For the twenty-four years covered by the foregoing statement the exports per inhabitant averaged £20 8s. 6d., falling as low as £16 4s. 3d. in 1886, and reaching £24 3s. 6d. in 1883. Excluding, however, all but domestic produce, the average value of commodities exported was £14 13s. 7d. per inhabitant, and including gold locally produced, £15 6s. 10d. If the prices of commodities had remained constant from year to year, the value of domestic exports would have afforded a ready means by which the progress of productive enterprise might be gauged. Allusion has been made on several occasions in this chapter to the fall in the prices of the great staple exports, and taking all commodities into consideration, the fall during the last twenty-four years has been nearly 45 per cent., the most serious decline occurring during the last ten years. As the question of prices is reviewed at length elsewhere in the chapter on "Food Supply and Cost of Living," it will here suffice to give the price-level for various years which are there established:—

Year.	Price-level. 1895 prices=1,000.	Year.	Price-level. 1895 prices=1,000.
1872	1,793	1884	1,681
1873	1,900	1885	1,476
1874	1,883	1886	1,419
1875	1,878	1887	1,458
1876	1,778	1888	1,415
1877	1,631	1889	1,437
1878	1,624	1890	1,388
1879	1,686	1891	1,261
1880	1,654	1892	1,194
1881	1,642	1893	1,080
1882	1,695	1894	974
1883	1,695	1895	1,000

Applying the figures just given to the value of commodities as ascertained on page 123, and adding the value of locally-won gold exported, the comparative value of domestic exports for each year is arrived at, on the supposition that the prices of 1895 were obtained during the whole period. The results are as stated in the following table:—

Year.	Value per Inhabitant of Domestic Exports, including Gold, on the basis of 1895 prices.	Year.	Value per Inhabitant of Domestic Exports, including Gold, on the basis of 1895 prices.
	£ s. d.		£ s. d.
1872	8 13 6	1884	9 10 2
1873	11 0 10	1885	8 10 0
1874	8 18 9	1886	8 8 7
1875	9 12 6	1887	9 14 5
1876	9 1 8	1888	10 14 11
1877	9 14 3	1889	11 12 10
1878	9 7 4	1890	11 6 1
1879	8 13 1	1891	14 17 1
1880	9 19 3	1892	12 11 1
1881	9 17 7	1893	13 1 6
1882	10 0 8	1894	13 3 10
1883	11 12 0	1895	13 0 0

For the whole period the average exports per inhabitant, computed on 1895 prices, amounted to £10 10s. 11d. For the first period of six years the average was £9 10s. 3d.; for the second six years, £9 18s. 4d.; for the third six years, £9 15s. 2d.; and for the last six years £12 19s. 11d. These figures cannot but be looked upon as highly satisfactory, and afford ample evidence that the most productive period in the colony's history was the six years that closed with 1895.

INCREASE OF PRODUCTION.

Under the present conditions of development of the colony, the export of domestic produce is a very fair indication of its progress in productive pursuits. In the following table the average export of domestic produce per annum is given for the period which elapsed between 1870 and the close of 1895; but in order that they may be more easily grasped, as well as to avoid the irregularities of individual years, the figures have been grouped in series of five years. Besides the export of domestic produce, the table shows the average sum paid as interest on loans raised in England, and as earnings of investments held by non-residents. The difference between the two sets of figures represents the amount available for the purchase of goods, which come to the colony as imports. The bearing of the last two columns will presently appear:—

Period.	Average Exports of Domestic Produce per annum.	Average sum paid per annum as Interest on Loans raised in England and as Earnings of Investments held by non-residents.	Excess of Exports of Domestic Produce over Interest on Loans and Earnings of Investments by non-residents.
	£	£	£
1870-74	7,874,800	1,806,800	6,068,000
1875-79	9,745,900	1,883,400	7,862,500
1880-84	13,468,900	2,289,000	11,179,900
1885-89	14,253,100	3,838,000	10,415,100
1890-94	17,804,900	5,163,900	12,641,000
1895	16,436,200	4,949,000	11,487,200

With the exception of the individual year of 1895, the figures just given show a continuous increase in the exports from period to period, notwithstanding the great fall in prices which has taken place. Against this it may be urged that there has been an increase in population, and in order that the comparison may be exactly on the same lines the following table has been compiled. The figures show the export of domestic produce per head, as well as the average sum paid as interest on loans raised in England and as earnings of investments held by non-residents, the excess of domestic exports over interest on loans and earnings of absentee capital, and the last figures reduced to the level of 1870-74 prices:—

Period.	Average Exports of Domestic Produce per annum.	Average sum paid per annum as Interest on Loans raised in England and Earnings of Investments held by non-residents.	Excess of Exports of Domestic Produce over Interest on Loans and Earnings of Investments held by non-residents.	Excess of Exports reduced to the common level of 1870-74 prices.
	£	£	£	£
1870-74	15·0	3·5	11·5	11·5
1875-79	15·4	3·0	12·4	13·2
1880-84	16·8	2·7	14·1	15·4
1885-89	14·2	3·8	10·4	13·2
1890-94	15·2	4·4	10·8	16·7
1895	13·0	3·9	9·1	16·7

It will be seen that although during the twenty-six years covered by the tables the annual export of domestic produce has risen from £7,874,800 to £16,436,200, in value per head of population it was £2 less in 1895 than during the period extending from 1870 to 1874. The average sum paid by the colony to its outside creditors has increased from £1,806,800 to £4,949,000 per year, or from £3·5 to £3·9 per head. The surplus available to pay for imports has risen from £6,068,000 to £11,487,200. Presented as the average per inhabitant, the amount shows a decrease from £11·5 to £9·1; but when stated in terms of the prices obtained in 1870–74, the excess of exports per head shows an increase of more than 45 per cent.—that is to say, from £11·5 to £16·7 per head.

It will be gathered from the foregoing figures that in spite of the large and increasing amount which the colony owes to its outside creditors, and the great fall in prices, the export of domestic produce available to pay for imports shows but little decline, while if prices had remained stationary during the whole period there would have been an increase during the last six years as compared with the first five years of £5·2 per head. The natural satisfaction to which the figures give rise extends to the whole period with the exception of the five years from 1885 to 1889.

An interesting question has been raised as to the effect of the import of British capital on the productive enterprises of the country. The figures available in regard to production do not enable a comparison to be made for the whole period from 1870 to the present time, but making use of the export figures already quoted, and those given in the part of this work relating to "Private Finance," the following comparison is obtained:—

Period.	Average Export of Domestic Produce per annum.			Average Import of Capital per annum.	
	Total.	Per inhabitant.		Total.	Per inhabitant.
		At actual prices.	At 1870-74 prices.		
	£	£	£	£	£
1870-74	7,874,800	15·0	15·0	921,200	1·8
1875-79	9,745,900	15·4	16·4	2,966,200	4·7
1880-84	13,468,900	16·8	18·4	4,170,800	5·0
1885-89	14,253,100	14·2	18·0	6,482,400	6·5
1890-94	17,804,900	15·2	23·6	2,981,800	2·5
1895	16,436,200	13·0	23·8	*993,000	*0·8

* Net export of capital.

The average value of domestic exports, when reduced to the comparative basis of 1870–74 prices, shows £23·8 per head in 1895 as against an average of £15 in 1870–74, being an increase of more than 58 per cent. The five years which ended with 1879 show an average export of £15·4 per head, which is equal to £16·4 on the 1870–74 prices; the five years ending with 1884 show £16·8 per head, equal to £18·4 on the 1870–74 prices; the five years ending in 1889 show £14·2 per head, equal to £18 on the same basis; while the five years which ended with 1894 show £15·2 per head, equal to £23·6 on the 1870–74 prices. In the last two columns of the table just given will be found the average import of capital during each series, and it would seem that during the five years which closed with 1889 an average of £6,482,400 was imported during each year—that is to say, about £6·5 per head. The deduction to be drawn from the foregoing figures is that the years in which an undue importation of capital took place compare unfavourably as regards production with other years in which there was a more moderate import, the lowest point of production being reached in the years when the largest amount of British capital was brought to the country, and the highest during those years in which a very much reduced amount of capital reached these shores.

ARTICLES OF EXPORT.

Wool is the staple export of the colony, and comprises considerably more than half the value of the domestic exports. The quantities and values of the wool exported since 1870 are given in the next table, and from the figures it will be readily seen how greatly the colony depends for its prosperity upon the produce of its flocks. The weights given represent the actual exports of New South Wales wool, washed and greasy being taken together :—

Year.	Weight.	Value.	Year.	Weight.	Value.
	lb.	£		lb.	£
1870	47,440,610	2,741,141	1889	261,853,484	10,620,636
1875	87,534,280	5,651,643	1890	236,322,828	8,991,396
1880	154,871,832	8,040,625	1891	331,887,720	11,036,018
1885	168,151,659	7,246,642	1892	312,225,293	10,211,456
1886	173,985,640	7,028,596	1893	318,782,858	9,675,061
1887	216,450,342	8,911,155	1894	331,774,424	9,011,790
1888	235,848,944	9,089,776	1895	297,448,104	8,958,690

Besides the clip of the colony, there has been a large export of other wool, chiefly the produce of Queensland. In 1885 the export of foreign wool amounted to slightly more than 10,000,000 lb. weight, valued at £429,399; but the returns for the next six years showed a great decrease on these figures. In 1892 the export again exceeded 10,000,000 lb. in weight; while in 1895 it amounted to 32,544,571 lb., valued at £1,017,354. The exports as returned by the Customs are given herewith; but the quantities fall short of the actual amounts, as not a little wool, the produce of other places, was exported in past years as New South Wales wool—on the same principle, probably, that led to the shipment in 1895 from Melbourne, as the produce of Victoria, of nearly 55,000,000 lb. weight of wool, the bulk of which was grown in New South Wales :—

Year.	Weight.	Value.	Year.	Weight.	Value.
	lb.	£		lb.	£
1880	7,614,490	431,605	1890	7,415,438	241,276
1885	10,221,766	429,399	1891	8,803,662	276,962
1886	4,664,971	173,380	1892	10,826,721	328,691
1887	7,844,867	288,916	1893	26,200,018	774,850
1888	7,407,309	268,739	1894	22,391,022	616,333
1889	4,375,545	164,434	1895	32,544,571	1,017,354

The export of domestic wool in 1891, both as regards value and quantity, was the highest ever attained, the increase over the previous year being 95,564,892 lb., valued at £2,044,622. A large portion of this advance, however, was not due to increased production, but to the circumstance that in 1890 the growers were unable to get part of their produce to market by reason of the general strike to which reference has already been made. Considered in this light, the decrease in 1892, as compared with 1891, of 19,662,427 lb., of the value of £824,562, is more apparent than real. In 1894, however, the domestic export nearly reached the quantity shipped in 1891, being only 113,296 lb., less; but it is a striking illustration of the fall in prices to find the value £2,024,228 less than in that year. In 1895, the season being unpropitious, the export fell to 297,448,104 lb., but owing to a slight rise in the price, the value was only £53,100 less than in 1894.

A marked feature of the wool trade of recent years has been the growing disposition shown by buyers on the Continent of Europe to purchase their supplies direct from the colony instead of obtaining them through the London brokers. Year by year the representatives of foreign manufacturers who visit Sydney for the purpose of attending the wool sales become more numerous. Sixteen years ago all the wool destined for Europe may be said to have found its way to London, while in 1895 the shipments to Belgium, France, Germany, and Italy of the staple of local growth amounted to 91,320,974 lb., valued at £2,688,846. The growth of a direct trade with the Continent is desirable, both in the interest of the foreign consumer and in that of the grower, as the profit of the middleman, as well as the cost of additional carriage and handling, is thereby saved. The following table shows the steady increase in the quantity of domestic wool shipped direct to the Continent during the past eleven years:—

Year.	Quantity.		Value.
	Weight.	Proportion of Total Domestic Export.	
	lb.	per cent.	£
1885	14,734,724	8·8	486,693
1886	17,307,973	9·9	537,472
1887	22,009,275	10·2	715,084
1888	29,023,106	12·2	906,526
1889	35,933,721	13·7	1,285,494
1890	42,300,222	17·9	1,509,686
1891	64,207,855	19·3	1,838,740
1892	85,334,191	27·3	2,568,685
1893	88,858,560	27·9	2,629,322
1894	98,316,430	29·7	[illegible]
1895	91,320,974	30·7	[illegible]

There was formerly a disposition to export washed wool. The tendency is now, however, towards the export of wool in grease, except where the conditions as to carriage, etc., are exceptional. Further reference to the wool trade will be found in the chapter relating to pastoral pursuits.

The other animal products—tallow, skins, leather, and such like—form together an export of considerable value, the shipments of tallow especially having largely increased during the past few years.

The number and value of the live stock exported have varied considerably from year to year, being affected greatly by the seasons experienced both in this colony and in the neighbouring provinces. The export of horses has increased both in number and in value; and the same may be said of the imports, though it should be borne in mind that the figures in respect to horses are to some extent misleading, as the number of thoroughbred racing animals passing backwards and forwards between Sydney and Melbourne, which are entered as exports and imports, gives more importance to the trade than its magnitude really warrants.

In 1895 the export of horned cattle declared to be the produce of New South Wales amounted to 37,897 head, valued at £117,437, and the import to 91,296, valued at £278,436. The export of sheep during the year was 966,031, worth £284,477; and the import reached 420,374 in number, and in value, £156,609. But, as in the case of horses, the figures for the export and import of other live stock are to a certain extent misleading, inasmuch as the returns are swollen by the inclusion of stock sent from one colony to another in the hope of obtaining better pasturage, or for fattening or breeding purposes. The general tendency of the trade in 1895 may, however, be gathered from the table below, the export figures comprising both home-reared and other stock:—

Live stock.	Imported.		Exported.	
	Number.	Value.	Number.	Value.
		£		£
Horses	4,222	83,937	5,219	97,460
Horned cattle	91,296	278,436	41,555	131,969
Sheep	420,374	156,609	999,773	299,154
Pigs	4,759	4,736	832	790
Other stock	....	4,438	....	2,176
Total	....	528,156	....	531,549

Coal also forms one of the staple exports of New South Wales, having been exported to the value of £773,954 in 1895, representing a volume of 2,166,230 tons. The development of the coal trade of the colony will be found traced in the chapter on "Mines and Minerals," and it will be seen that this product has been subject to less fluctuation than any other item of export.

The export of silver and silver-lead ore has become important since 1884, the figures for 1893 amounting to £3,031,720, although, in consequence of the great fall in the price of the metal, coincident with the closing of the Indian mints to free coinage, the export declined to £2,289,489 in 1894; while in 1895, owing to a lengthy stoppage of work at the principal silver mine, the export declined still further to £1,648,103. The export of locally-produced copper and tin revived somewhat during 1888, but has fallen off very considerably since. Copper was exported in 1895 to the value of £140,866, and tin to the extent of £138,623. These figures are taken from the returns of the Customs department, but the amounts are swollen by ore from other Australasian colonies, particularly from Queensland and South Australia, sent to be refined in New South Wales. The actual local production of copper and tin during 1895 may be set down at £136,969 and £87,937 respectively. The trade in these metals is still very much below what it was in 1884 and previous years.

Gold bullion and specie form one of the most important exports of the colony. The export during 1870 and subsequent periods was:—

Year.	£	Year.	£
1870	1,824,524	1889	3,211,747
1875	2,106,074	1890	2,289,022
1880	863,012	1891	3,732,894
1885	1,461,478	1892	2,263,661
1886	1,619,278	1893	2,995,777
1887	1,318,917	1894	2,308,264
1888	2,122,337	1895	3,145,557

Taken by itself, the foregoing statement might seem to favour the opinion sometimes hazarded that the colony is being denuded of its gold. Such, however, is not the case. The gold shipped is chiefly the produce of other colonies, sent to Sydney to be minted. The amount of gold raised in the colony during 1895 was valued at £1,315,929, while the domestic bullion and specie exported is estimated at £1,063,558. This, however, was an exceptional year, and in most years only a limited quantity of the amount exported is of local production.

Divided into the classes adopted for the imports, the exports of home produce in 1895 appear as follow:—

	£
Food and beverages, including breadstuffs	883,949
Wines, fermented and spirituous liquors	11,307
Live stock	498,918
Animal and vegetable products, including wool	10,807,990
Clothing and textile fabrics	31,386
Minerals and metals, raw or partly worked up, including silver bullion, lead, and ore	2,243,144
Coal and coke	783,866
Specie and gold bullion	1,063,558
Articles of education, art, and amusement	12,325
Manufactured articles not included elsewhere	75,174
Unclassified articles	24,593
Total	£16,436,210

By far the larger portion of the exports consists of raw materials. As an export manufacturing country New South Wales has not yet achieved any position; and though its manufactures are not without their importance, as will hereafter appear, its own markets furnish so wide a scope for manufacturing industry as to make it improbable that there will be any great development of export trade in home manufactures in the immediate future. So many channels have been presented for the successful employment of capital that little attention has been bestowed upon the possibility of New South Wales supplying other countries with its own manufactures; but as these outlets of capital are closed, the vast possibilities of the country in other directions will doubtless be recognised. The following table has been prepared with the view of showing the relative importance, and the value per head of population, of the principal articles exported during the last five years. The preponderance of raw material, and raw material advanced one stage towards the finished manufacture, will be apparent:—

Articles.	1891.		1892.		1893.		1894.		1895.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Butter	0	5	1	3	2	1	2	5	0	11
Coal and coke	23	0	17	5	13	7	13	2	12	4
Copper	3	7	3	2	1	0	1	2	2	3
Fruit (Green)	2	3	1	10	2	3	1	8	1	1
Grain, pulse, etc.—										
Wheat	0	10	......		......		......		......	
Maize	0	1	0	1	......		......		0	1
Flour	0	7	0	3	0	3	0	1	0	2
Leather	2	5	3	0	3	3	3	9	4	5
Live stock—										
Cattle	11	5	2	11	3	3	1	9	1	10
Horses	2	10	3	4	1	8	1	6	1	6
Sheep	11	5	8	4	4	9	4	9	4	6
Meat	3	6	4	10	5	2	6	10	11	2
Shale (kerosene)	1	9	2	2	1	4	0	10	1	3
Silver bullion, lead, and ore	63	4	41	10	50	1	36	8	26	1
Skins and hides	8	6	11	8	10	2	6	7	9	8
Tallow	5	4	7	4	12	3	14	5	12	3
Timber (dressed and rough)	0	10	0	10	0	7	0	5	0	8
Tin	4	9	5	4	3	9	3	0	2	2
Wool	193	0	172	0	159	10	145	8	141	8

The total values of some of the principal articles of home produce exported during 1895 are as follow :—

	£		£
Butter	57,575	Meat	705,924
Coal and coke	782,479	Shale, Kerosene......	77,934
Copper (net export)...	136,969	Silver and ore	1,648,103
Flour	12,540	Skins	611,504
Fruit	68,986	Tallow..................	773,105
Grain and pulse	10,223	Timber	44,305
Leather	279,281	Tin (net export)......	87,937
Live stock	498,918	Wool	8,958,690

RE-EXPORT TRADE.

The re-export trade of the colony increased considerably until 1889, but since that time its value has, with the exception of one year, not been maintained. The shipping facilities of Sydney at one time attracted to the port a large amount of trade from New Zealand, Queensland, and the South Seas, for transhipment to Europe; but the establishment of direct communication between those colonies and Europe checked to some extent the expansion of the re-export trade. The re-export trade overland is comparatively limited, amounting in 1895 to £450,952, out of a total of £5,498,575.

The total value of the re-exports of the colony, and the value of the gold bullion and specie included therein, during the periods mentioned, were as shown below. It will be seen that gold, consisting largely of Queensland metal coined at the Mint, and of specie shipped to London by the banks, forms a large proportion of the trade :—

Year.	Re-exports.			Gold Bullion and Specie included in the foregoing.
	Seaward.	Overland.	Total.	
	£	£	£	£
1870	2,886,267	8,210	2,894,477	1,491,893
1875	3,783,785	4,008	3,787,793	1,459,057
1880	3,626,991	47,880	3,674,871	838,115
1885	4,525,883	164,944	4,690,827	1,448,534
1886	3,999,328	135,380	4,134,708	1,588,756
1887	4,120,184	161,254	4,281,438	1,278,162
1888	4,684,752	552,986	5,237,738	1,944,327
1889	5,222,288	372,253	5,594,541	2,880,883
1890	4,626,606	186,606	4,813,212	2,289,022
1891	4,567,759	290,549	4,858,308	2,436,801
1892	4,145,912	119,233	4,265,145	2,263,661
1893	5,191,249	635,761	5,827,010	2,969,892
1894	4,518,505	154,207	4,672,712	1,982,962
1895	5,047,623	450,952	5,498,575	2,081,999

The following table shows the value of the principal articles of other than domestic produce and manufacture exported during 1895 :—

	£		£
Apparel, Wearing	55,976	Iron and steel (*continued*)—	
Bags and sacks	35,184	Galvanised sheets and bars	37,440
Beer and ale	25,439	Leather	15,427
Boots and shoes	27,641	Live stock	32,631
Copper	14,153	Machinery	103,823
Copra	60,381	Meats	14,282
Drapery	161,319	Paper, books, etc.	39,129
Drugs, chemicals, etc.	39,041	Skins and hides	312,962
Flour	3,710	Spirits	36,720
Fruit, Fresh and dried	25,203	Sugar	78,832
Furniture and upholstery	12,059	Tallow	329,040
Gold specie and bullion	2,081,999	Tea	77,737
Hardware	30,771	Tin	48,050
Iron and steel—		Tobacco, cigars, and cigarettes	53,323
Manufactured wrought	27,514		
Wire—black and galvanised	23,867	Wool	1,017,354

Amongst raw materials the principal articles re-exported are tallow, skins and hides, copra, tin, and wool; while the manufactured articles are chiefly drapery, apparel, hardware, iron and steel, machinery, drugs and chemicals, books and stationery, boots, beer and spirits, tobacco, cigars and cigarettes, and also large quantities of provisions. Grouped under the several heads already adopted for the imports and exports, the value of the re-export trade for the year 1895 will be found below :—

	£
Food and beverages, including breadstuffs	298,146
Wines, fermented and spirituous liquors	76,118
Live stock	32,631
Animal and vegetable products, including wool	1,914,009
Clothing and textile fabrics	308,265
Minerals and metals, raw or partly worked up, including silver bullion, lead, and ore	292,292
Specie and gold bullion	2,090,280
Articles of education, art, and amusement	95,423
Manufactured articles not elsewhere included	316,148
Articles unclassified by Customs	75,263
Total	£5,498,575

OVERLAND TRADE.

As the major portion of the goods exported overland simply passes through the border colonies of Victoria and South Australia to Great Britain, the diversion of the trade along the railways of the colony to its ports must be looked upon as a distinct gain. It was believed that the extension of the trunk railways to the centres of the pastoral industry would have the effect of permanently diverting a not inconsiderable amount of trade from Victoria and South Australia, but it will be seen from figures in another part of this volume that such diversion has only been partial. The condition of the Darling and other western rivers exercises a marked influence on the overland trade, especially in wool; and it is found that when the rivers are not easily navigable a larger proportion of this staple reaches the eastern seaboard than is the case in other seasons. A marked increase in the total trade will be noticed in 1886 and the following years, and in 1891 the value of the trade was more than twofold that of the year first mentioned; but there was a large falling off in the trade in 1892, mainly owing to the strike at Broken Hill, the decline in the total value of imports and exports at the Willyama Custom House alone amounting to no less than £1,988,961. This was in no small degree due to the diminished requirements of the population of the Broken Hill silver-fields, whose natural outlet is by way of Adelaide, which is connected by rail with Broken Hill. The slight revival in the overland trade in 1893 was due to the greater imports and exports of gold in consequence of the financial crisis; while the decline in the exports since that year has chiefly been caused by the great fall in the price of silver in 1894, and by a fire in the workings of the principal mine in 1895, which adversely affected the industry in the Barrier district; and in the imports, to a number of causes, amongst which were a smaller import of live stock from Queensland and the still further contraction of the goods introduced for consumption at Broken Hill.

Year.	Imports.	Exports.	Total.
	£	£	£
1870	1,071,087	2,177,813	3,248,900
1875	1,460,528	4,343,729	5,804,257
1880	1,438,155	4,768,542	6,206,697
1885	2,611,130	3,405,073	6,016,203
1886	2,039,168	4,251,800	6,290,968
1887	3,166,573	5,231,454	8,398,027
1888	3,040,010	5,559,681	8,599,691
1889	3,150,698	6,919,491	10,070,189
1890	4,707,341	8,026,376	12,733,717
1891	4,319,204	8,630,248	12,949,452
1892	2,928,417	6,034,211	8,962,628
1893	2,698,011	6,706,936	9,404,947
1894	1,788,654	5,222,089	7,010,743
1895	1,783,368	4,748,129	6,531,497

TRADE WITH THE UNITED KINGDOM.

The trade with the United Kingdom holds a high position in regard to value, being until recent years even larger than the intercolonial trade of the colony; and even now, if to the value of goods coming directly from Great Britain were added that of goods passing through the neighbouring colonies, but destined for or coming from England, the proportion of British trade would be still higher; f[illegible] the nominal trade between the United Kingdom and N[illegible] Wales amounted in 1895 to the large sum of £15,791,525 out of a total trade of £37,927,200, it is probable that the actual value of this trade was little short of £20,000,000. The amount of trade, as set down in the subsequent table, is, therefore, much below the truth, especially in regard to the exports, as the larger part of the produce exported to Victoria and South Australia overland is in reality destined for British ports. The seaward trade alone can be given, and this will be found in the following table, for 1870 and subsequent periods:—

Year.	Imports.	Exports.	Total British trade.
	£	£	£
1870	3,200,706	2,492,640	5,693,346
1875	6,062,226	6,374,503	12,436,729
1880	6,536,661	7,525,637	14,062,298
1885	11,885,597	7,293,133	19,178,730
1890	8,628,007	6,623,431	15,251,438
1891	10,580,230	8,855,465	19,435,695
1892	8,883,983	7,653,915	16,537,898
1893	7,218,124	8,269,507	15,487,631
1894	5,983,489	7,956,377	13,939,866
1895	6,420,107	9,371,418	15,791,525

INTERCOLONIAL TRADE.

Even more considerable than the British trade in most years apparently stands the intercolonial, although in 1895 it was £878,872 less, the amount being £14,912,653. By far the larger part of this trade, however, must be credited to the United Kingdom, as the natural outlet for the produce of the Southern and Western districts is by way of Victoria and South Australia. Thus out of £7,321,668 imported by New South Wales during 1895 from the Australasian colonies, goods to the value of £3,655,000 only, excluding gold, were the produce of the places from which they were received, and of the £7,590,985 exports only £1,720,000 were retained for local consumption by the colonies to which they were sent. The nominal value of the intercolonial trade since 1870 was as follows:—

Year.	Imports.	Exports.	Total trade.
	£	£	£
1870	3,677,927	3,837,680	7,515,607
1875	5,878,751	6,570,127	12,448,878
1880	5,945,788	7,381,172	13,326,960
1885	8,595,429	6,936,139	15,531,568
1890	10,981,721	11,284,740	22,266,461
1891	11,127,178	11,603,170	22,730,348
1892	9,201,193	8,917,677	18,118,870
1893	8,895,787	9,881,038	18,776,825
1894	7,794,168	8,243,954	16,038,122
1895	7,321,668	7,590,985	14,912,653

The total intercolonial trade of the Australasian colonies with New South Wales increased largely from 1885 to 1891, due almost entirely to the trade which sprang up with the working of the Barrier silver mines. The province of South Australia lies between the western district of New South Wales and the sea, and practically the whole of the trade of the Broken Hill district passes through that province, and swells the volume of commerce credited to it. Even with this trade included, however, it will be seen from the following table, which distinguishes the seaward from the overland portion, that the exchange of commodities between New South Wales and the other colonies in 1895 was less than it was ten years ago :—

Year.	Seaward.	Overland.	Total.
	£	£	£
1885	9,515,365	6,016,203	15,531,568
1886	9,500,481	6,290,966	15,791,447
1887	9,612,332	8,398,027	18,010,359
1888	10,100,491	8,599,691	18,700,182
1889	11,318,168	10,070,189	21,388,357
1890	9,532,744	12,733,717	22,266,461
1891	9,780,896	12,949,452	22,730,348
1892	9,156,242	8,962,628	18,118,870
1893	9,371,878	9,404,947	18,776,825
1894	9,027,379	7,010,743	16,038,122
1895	8,381,156	6,531,497	14,912,653

As already pointed out, a great proportion of the intercolonial export trade, especially that which is sent overland, represents produce of New South Wales ultimately destined for European markets, though credited to the colony to which it is sent in the first instance. Similarly with the imports, a large part of the trade comprises goods which have originally come from Great Britain but have been purchased in the Melbourne and Adelaide markets, or are passing through those ports as being the nearest routes to their destination. It is estimated that the value of goods the produce of New South Wales consumed in the various colonies was £1,720,000 in 1895, and the value of the produce of the other colonies consumed in New South Wales, excluding gold coin and bullion, was £3,655,000. If from the value of New South Wales exports there be deducted £453,040, the apparent value of domestic live stock exported to the adjacent colonies, it will be seen that the Australasian markets consume a very small quantity [illegible] goods of this colony.

VICTORIA.

Victoria came first amongst the colonies of the group, as regards its trade with New South Wales, until 1893, when the decline which has taken place of late years in the value of the goods which it sends to this colony has caused it to rank below Queensland. It is estimated that prior to the extension of the railway system of New South Wales into the Riverine districts, nearly one-fourth of its territory, comprising some of its richest portions, traded almost exclusively with Victoria. This traffic has now, to a great extent, been diverted along New South Wales lines to Sydney; and the trade of the colony with Victoria, instead of increasing with the settlement of those districts, is declining. The following table shows the trade of the year 1870, and of subsequent periods up to 1895:—

Year.	Imports.	Exports.	Total.
	£	£	£
1870	1,153,695	2,583,552	3,737,247
1875	2,066,156	4,269,770	6,335,926
1880	2,187,119	4,578,867	6,765,986
1885	3,309,696	3,450,796	6,760,492
1890	2,097,259	5,386,553	7,483,812
1891	2,818,935	5,443,663	8,262,598
1892	2,432,399	4,278,907	6,711,306
1893	2,020,421	3,620,302	5,640,723
1894	1,583,206	3,129,663	4,712,869
1895	1,499,592	3,078,017	4,577,609

The import trade of the colony with Victoria covers a large range of articles, and in this respect differs from the export, which mainly comprises three leading items of raw produce—wool, live stock, and coal. Dividing the imports from Victoria into two classes, viz., Victorian and other produce, the chief imports under the former class are agricultural implements, butter, breadstuffs, fruit, oats, hay and other fodder, and vegetables; while under the second head come drapery and apparel, drugs, hardware, iron, machinery, stationery, tea, raw sugar, and various manufactured articles. Victorian produce, properly so called, comes chiefly to Sydney; the other articles are taken by the southern and western portions of the colony, which have for many years looked to

Victoria as a market whence such supplies are to be derived. The following are the values of the principal items of import from Victoria during the last five years :—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Agricultural implements	28,765	34,980	43,853	12,907	13,716
Bags and sacks	11,562	11,937	13,896	16,372	12,847
Beer (in wood and bottle)	17,485	21,242	18,611	15,218	12,785
Biscuits	1,348	1,386	745	711	584
Boots and shoes	29,295	17,271	12,111	10,459	12,249
Butter	19,017	7,774	3,346	2,711	61,453
Candles	9,034	3,878	4,351	3,120	1,885
Cheese	1,530	693	488	374	1,035
Cordage and rope	5,390	3,697	3,130	3,695	4,568
Drapery	230,879	143,492	92,151	110,435	121,163
Drugs and apothecaries' wares	27,017	14,934	12,786	10,440	11,497
Earthenware and china	14,285	4,919	5,681	5,400	2,889
Flour	382,382	318,598	153,430	130,093	66,598
Fruit—					
Green	16,813	19,959	14,062	14,254	17,905
Dried	11,645	6,352	6,312	7,885	7,271
Furniture and upholstery	26,328	11,235	7,280	6,679	9,432
Gold (coin, bars, and dust)	11,006	78,608	354,219	144,199	33,033
Grain and pulse—					
Wheat	90,310	144,583	41,536	20,152	27,033
Oats	6,559	8,867	17,001	3,992	2,099
Other	12,509	36,349	40,727	12,129	12,023
Hardware	49,865	46,151	44,746	24,187	28,961
Hay and chaff	169,097	173,022	150,290	83,218	87,586
Iron and steel goods	183,302	92,287	53,061	40,361	40,388
Jams and jellies	4,189	2,340	1,256	1,408	1,083
Jewellery	6,587	1,991	1,162	2,574	5,612
Lead	17,536	4,162	8,068	1,449	878
Leather	13,683	10,871	10,502	9,962	12,864
Live stock	283,261	246,350	160,461	165,475	128,741
Machinery	85,015	63,313	46,914	43,536	52,738
Malt and hops	18,696	33,155	35,820	18,848	29,534
Musical instruments	12,209	5,678	6,189	6,687	2,602
Oatmeal	18,721	15,561	14,651	12,195	11,461
Oilmen's stores	10,843	6,896	3,753	3,362	3,434
Oils	17,394	20,308	18,018	16,942	13,208
Paper, books, stationery, etc.	77,257	50,695	31,823	29,385	32,678
Potatoes	44,051	42,549	38,985	18,042	23,399
Saddlery and harness	8,432	6,978	5,004	4,486	4,202
Soap	23,327	7,604	8,619	8,290	7,082
Spirits	34,544	32,145	23,973	22,267	24,253
Sugar (raw)	72,451	61,408	49,672	86,793	59,269
Tea	94,823	121,452	60,674	78,618	57,077
Timber	22,553	24,920	13,741	13,335	19,034
Tobacco, cigars, etc.	23,686	27,352	16,982	15,831	17,357
Toys	11,146	5,521	4,319	614	978
Vegetables (green) and onions	28,450	28,307	25,363	28,121	25,409
Wearing apparel	112,754	76,006	65,927	61,927	57,436
Wines	9,127	6,182	3,593	3,484	4,805
Woolpacks	15,770	15,437	14,424	19,058	19,812

The chief export to Victoria is wool, forwarded to Melbourne for shipment to London and other European ports. A large quantity of this wool is shipped to Europe as the produce of Victoria, on account of the fact that better prices are generally obtained for "Port Phillip" wool. The value of wool exported to Victoria during 1870 and subsequent periods was as follows:—

Year.	£	Year.	£
1870	1,057,457	1891	2,779,963
1875	2,253,184	1892	2,518,459
1880	3,224,289	1893	2,210,198
1885	1,868,019	1894	2,030,645
1890	2,521,898	1895	1,958,643

The decrease shown since 1880 is chiefly owing to the decline in the market value of the staple, though it is also partly due to the extension of the railways, which has diverted much of the traffic from the old routes.

Live stock of all kinds form a large portion of the exports to Victoria, though the imports, especially of sheep, have also been valuable. Victoria has already reached the point where the demand for meat exceeds the cast of stock, and is, therefore, dependent upon the other colonies, especially New South Wales, for the supply of the deficiency, the amount of which is little short of one-fourth of the whole consumption. The sheep exported are almost entirely New South Wales produce; the cattle, however, are generally bred in Queensland, and fattened for market on runs in New South Wales.

Coal is next in importance as an export of this colony to Victoria, the value during 1895 being £256,137, which was far larger than the value of the trade in this staple with any other country. The only other article worthy of note is skins, which are sent to Victoria for re-export. The following table shows the export trade during the last five years:—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Coal	474,054	394,591	314,000	252,200	256,137
Coin—gold	325,000	......	100,000	......	......
Drapery	31,873	36,203	26,675	22,242	33,416
Fish (preserved)	12,756	4,038	908	1,742	3,232
Fruit (fresh)	71,340	79,123	76,629	57,846	31,993
Kerosene shale	8,034	9,940	8,646	2,849	4,842
Live stock	1,216,048	782,245	260,475	330,310	293,106
Machinery	19,561	9,315	13,474	16,335	13,092
Periodicals, books, paper, etc.	22,572	13,190	9,399	8,353	6,650
Skins	66,528	90,398	175,378	115,378	104,536
Tea	9,154	47,674	6,909	6,628	11,916
Timber	31,936	34,597	27,465	16,597	16,172
Wheat and other grain	52,488	6,997	2,553	1,071	9,434
Wines	9,232	2,380	1,814	2,815	2,436
Wool	2,779,963	2,518,459	2,210,198	2,030,643	1,958,643

The articles comprised in the import trade are much more varied than the exports, although in point of value the latter are nearly double the former.

The greater portion of the exports to Victoria, as well as over one-third of the imports, cross the border. The value of the imports overland, however, fell greatly, from the causes already specified, during 1886, and although an improvement has been shown in some years, the trade increasing 73 per cent. during the period from 1885 and 1890, it has only been of a temporary nature, and the overland export trade is now only half of the value at which it stood in 1891. The value in 1870 and subsequent periods was :—

Year.	Imports.	Exports.	Total.
	£	£	£
1870	448,308	1,811,848	2,260,156
1875	945,049	3,546,674	4,491,723
1880	963,620	3,824,310	4,787,930
1885	1,555,139	2,450,444	4,005,583
1890	986,527	4,237,004	5,223,531
1891	1,088,012	4,184,219	5,272,231
1892	907,283	2,960,171	3,867,454
1893	912,956	2,486,282	3,399,238
1894	598,736	2,148,962	2,747,698
1895	570,440	2,104,591	2,675,031

QUEENSLAND.

Amongst the colonies, Queensland now takes first rank in the value of its trade with New South Wales. The estimated amount of the imports and exports since 1870 is given hereunder. It is possible that the values are somewhat understated, as there is a good deal of trade in stock which does not come under the cognisance of the Customs officers. Though New South Wales and Queensland have a common boundary of 900 miles, the overland trade, except in live stock, is small.

Year.	Imports.	Exports.	Total Trade.
	£	£	£
1870	1,767,974	680,301	2,448,275
1875	2,521,312	1,238,226	3,759,538
1880	2,224,421	1,362,262	3,586,683
1885	2,913,588	2,174,266	5,087,854
1890	5,482,452	1,670,465	7,152,917
1891	4,303,520	1,063,780	5,367,300
1892	4,122,822	1,105,173	5,227,995
1893	4,746,152	1,599,898	6,346,050
1894	4,506,490	970,926	5,477,416
1895	4,011,776	1,416,257	5,428,033

The imports from Queensland chiefly consist of gold, live stock, sugar, wool, and tin. Large quantities of gold are sent from Queensland to be minted at Sydney, there being no Mint in the northern colony. The value of wool imported during 1895 was £906,691, being entirely for re-export. Stock was imported to the value of £333,646, of which £247,820 represented cattle. The importation of cattle from Queensland mainly depends on the suitability of the season for travelling stock. As shown in the subjoined table, the figures for 1895 are less than those for the previous four years:—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Boots and shoes	2,134	1,210	1,069	3,509	1,335
Drapery, apparel, etc. ...	20,324	17,113	7,966	10,898	12,467
Fruit (fresh)	17,892	17,497	32,691	17,647	42,282
Gold (bars and dust)......	2,092,364	2,190,477	2,155,843	2,392,785	1,693,663
Live stock	925,668	615,449	752,813	396,253	333,646
Maize	25,229	8,677	885	1,214	127
Oysters	10,694	10,856	7,416	2,360	2,910
Skins	76,743	139,800	164,719	146,533	240,581
Sugar (raw)	503,404	325,982	377,307	460,378	341,034
Tallow........................	45,461	106,710	144,126	249,516	294,504
Wool	341,670	473,428	783,276	566,503	906,691
Tin (ingots and ore)......	109,417	107,852	104,163	80,864	42,484

Most of the goods imported from Queensland are for re-export, and of the total imported during 1895 goods to the value of £2,507,000, or more than 62 per cent., were not retained in the colony for home consumption. New South Wales is the chief external market for Queensland sugars and live stock, and there is a growing trade in fruit and other sub-tropical products.

The exports have varied greatly in value from year to year from causes similar to those affecting the imports; they comprise a large number of items, mainly, however, the produce of foreign countries.

The values of the chief articles exported from New South Wales to Queensland have been as follow in the years named :—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Apparel (wearing)	20,446	22,028	17,063	16,151	18,912
Bags and sacks	12,482	7,095	12,218	17,382	16,232
Boots and shoes	34,996	10,485	8,223	6,278	15,534
Coal	7,291	11,317	9,640	6,438	9,580
Coin (gold)	36,020	201,020	841,700	305,000	580,200
Drapery	118,658	63,518	52,780	32,732	72,690
Flour	93,623	24,033	11,579	10,214	4,367
Fruit (fresh)	47,340	30,596	35,659	26,915	25,278
Hardware	25,019	26,063	19,341	15,264	15,433
Iron and steel	49,716	99,905	87,630	68,199	96,065
Leather	13,186	7,869	7,681	7,037	12,352
Live stock	139,729	174,376	125,666	79,707	99,784
Machinery	34,951	31,184	40,222	30,425	38,740
Paper, books, stationery, etc.	29,562	22,285	15,007	13,778	20,456
Potatoes	11,699	9,124	12,198	5,714	4,289
Tea	24,557	25,542	27,518	33,059	39,702
Tin (ingots, ore, and plates)	13,868	17,583	4,497	12,960	14,545
Tobacco, etc.	18,809	19,742	10,239	12,727	17,566
Wool	15,670	30,602	27,806	16,820	20,155

The export trade with Queensland has been rapidly falling away, but as this trade for the most part consisted of British goods re-exported, it was only to be expected that the opening of a direct trade with Europe would have this effect. The amount of border trade between the two colonies is shown in the following table. The fluctuation in the number, and consequently in the value, of stock imported and exported will account for the variation in the amounts :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1870	527,097	40,540	1891	1,103,682	231,613
1875	249,247	223,667	1892	879,716	243,971
1880	231,161	245,651	1893	904,186	546,757
1885	669,739	337,023	1894	556,585	166,486
1890	2,158,822	317,717	1895	592,126	507,244

South Australia.

The trade with South Australia was at one time more variable than that with any other colony, depending, as it then did, on the state of the Murray and Darling Rivers. After 1886, however, the element of uncertainty was neutralised by the expansion of trade which was found in the requirements of the population of Broken Hill silver fields. The additional trade has proved of enormous advantage to South Australia, as the Barrier district of New South Wales, with its population of nearly 20,000 persons, may be looked upon as commercially a province of the neighbouring colony. The total imports and exports for stated periods, commencing at 1870, were :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1870	366,480	350,247	1891	2,746,788	4,527,989
1875	987,933	654,232	1892	1,461,815	2,988,448
1880	690,407	830,256	1893	1,007,280	3,889,491
1885	890,335	810,953	1894	854,190	3,108,600
1890	2,036,492	3,700,124	1895	911,170	2,314,682

The list of imports is a long one, and like that of Victoria includes a large number of articles of foreign manufacture :—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Bags and sacks	9,866	3,259	2,876	2,476	6,788
Beer	33,199	18,730	13,565	7,724	8,709
Boots and shoes	43,255	5,739	4,615	3,316	3,730
Butter	30,760	20,785	13,609	11,402	25,610
Candles	12,412	7,390	8,393	6,108	6,033
Cement	14,366	2,278	336	1,038	340
Coke and coal	441,284	171,726	64,644	36,728	26,681
Copper (ore and ingots)	132,937	101,641	20,368	17,530	11,892
Drapery, wearing apparel, etc.	174,130	58,276	57,346	42,894	57,676
Drugs and apothecaries' ware	11,256	5,931	4,570	4,133	4,451
Dynamite, powder, arms, etc.	30,729	23,378	30,791	27,984	20,087
Eggs	36,435	25,034	22,308	16,360	15,570
Flour	300,989	169,727	66,550	83,242	77,487
Fruit (fresh)	26,504	18,817	17,505	11,783	13,350
,, (dried)	10,396	4,991	5,703	4,432	4,527
Furniture and upholstery	18,053	2,325	1,504	2,214	1,444
Gold (coin, bars, and dust)	59.962	83,053	126,056	21,772	37,027
Grain and pulse—					
Wheat	85,989	5,909	2,618	7,041	31,232
Other	33,955	28,176	15,006	13,194	19,190
Hardware	35,930	20,573	14,898	5,731	6,708
Hats and caps	12,791	4,971	3,445	2,752	2,977
Hay and chaff	61,650	52,077	14,434	24,023	77,204
Iron and steel	182,583	86,504	49,811	27,848	23,871
Jams and jellies	10,789	7,345	5,035	2,864	2,110
Live stock	40,235	22,889	16,678	8,276	22,680
Machinery	84,700	30,869	19,401	19,583	24,582
Milk (condensed & preserved)	11,201	9,101	8,018	5,940	5,672
Oils in bulk	11,555	7,220	8,050	7,032	6,931
Paper, books, stationery, etc.	21,475	9,521	5,972	4,681	4,664
Potatoes	18,213	9,559	11,115	9,234	7,299

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Skins and hides	9,524	15,634	3,911	6,408	11,117
Spirits	32,175	23,640	18,139	14,707	13,072
Sugar (raw)	33,886	39,589	40,175	35,974	26,255
Tea	16,788	13,928	14,876	13,766	10,646
Timber	259,141	156,973	127,069	108,793	80,715
Tobacco, cigars, etc.	12,769	11,340	10,558	9,390	9,644
Toys and fancy goods	9,971	3,015	3,541	2,752	3,751
Vegetables (not including potatoes)	13,380	12,516	11,940	10,315	7,639
Wines	9,151	5,716	2,975	1,891	2,182

The exports to South Australia are chiefly silver bullion, lead, and ore, and wool. The values of the principal items for the last five years are as follow :—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Boots and shoes	12,212	5,894	3,176	2,391	2,041
Coal	129,648	62,869	62,858	63,418	51,947
Coin (gold)	10,000	14,000	59,000	445,000	19,000
Coke	5,592	232	3,813	10,033	6,701
Live stock	141,956	58,717	112,335	90,094	71,064
Machinery	11,860	9,762	16,352	6,279	10,113
Paper, books, & stationery	12,905	1,856	2,516	3,617	2,798
Silver (ingots, lead, and ore)	3,442,381	2,354,938	2,988,018	2,254,864	1,605,774
Skins	45,064	37,871	31,392	46,711	39,961
Sugar (raw)	16,030	5,234	17,751	1,971	3,055
Wool	599,749	361,817	489,092	488,835	388,240

The records of the overland trade were not kept with exactitude before the year 1877, but the time which has since elapsed is amply sufficient to illustrate the importance of the trade. The subjoined statement shows that since that year there has been a large expansion. The imports and exports of 1877, taken together, amounted to £464,252, but in 1891 they reached the very high figure of £6,341,926. In 1892 the figures fell to £3,971,487, but in 1893 they rose to £4,554,766, only to fall, however, to £2,757,096 in 1895. The expansion from 1886 to 1891 was due, as already pointed out, to the requirements of the newly-found silver-fields near the South Australian border, and the main reason for the decline in 1892 was to be found in the diminished silver production, and the consequently lessened amount of imports into the Barrier district. The revival in 1893 was owing to increased production at Broken Hill consequent on the settlement of the industrial disputes which had affected the silver industry in the previous year; but the great fall in the market value of the metal in

1894 brought the trade down to its 1892 level; and stoppage of work in one of the principal mines, in consequence of a fire, was responsible for a further fall in 1895.

Most of the articles given in the foregoing list are sent to South Australia for the purpose of re-export, and are not, in the true sense, exports to that colony. It is not possible, however, to trace these goods to their ultimate destination, and, in accordance with the system adopted in most Customs statistics, the country which the goods first enter is credited as dealing directly with this colony. This remark applies with equal force to Victoria. The imports from South Australia *via* Silverton, Willyama or Broken Hill, and Wentworth on the Darling, amounted to £2,127,510 during 1891, but since that year they have steadily declined, until in 1895 they were but £620,802 in value. It is anticipated that the extensions of the railway system of this colony to the banks of the Darling at Bourke and Wilcannia will eventually divert not a little of the traffic which has hitherto gone to Adelaide. The certainty of speedy delivery, and the less amount of handling to which goods will be subjected, will probably more than compensate for the additional expense of delivery. The overland trade since 1877 is shown below :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1877	253,838	210,414	1890	1,561,992	3,471,655
1880	243,374	698,581	1891	2,127,510	4,214,416
1885	386,252	617,606	1892	1,141,418	2,830,069
1886	442,034	1,396,403	1893	880,869	3,673,897
1887	713,238	1,513,241	1894	633,333	2,906,641
1888	1,154,924	1,359,802	1895	620,802	2,136,294
1889	1,092,095	2,731,656			

TASMANIA.

The commercial intercourse of New South Wales with Tasmania at one time promised to develop into importance, but the total trade was less in 1895 than in 1885. It will, however, be seen that the imports still largely exceed the exports, and while the difference in the two branches of the trade was becoming less every year until 1891, the imports in 1895 were again about twice the value of the exports :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1870	90,827	26,555	1891	377,174	252,356
1875	167,870	44,274	1892	453,597	226,864
1880	383,106	81,484	1893	356,622	209,546
1885	582,177	108,758	1894	342,522	180,583
1890	432,615	215,674	1895	302,270	152,451

The chief imports are tin in ingots and silver ore, entirely for the purpose of re-export; green fruit, potatoes, and other agricultural produce. The principal articles of import worthy of note are as follow:—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Bark	26,052	17,652	16,775	16,959	16,884
Coin (gold)	25,050	....	....	....	....
Fruit (green)	57,153	93,661	56,358	69,856	64,192
Hops	11,600	12,241	11,502	14,621	12,319
Jams and jellies	9,516	3,320	3,342	2,223	1,785
Live stock (sheep)	38,654	34,827	21,648	14,335	10,449
Potatoes	40,078	63,210	81,525	65,330	78,108
Silver ore	24,866	37,017	24,637	51,769	9,885
Straw	7,353	3,405	1,259	243	3,374
Timber	8,553	7,017	5,434	3,583	4,321
Tin (ingots)	97,806	115,242	90,276	75,100	40,010

The export trade embraces a large number of articles, the most important being live stock, £5,794; raw sugar, £46,934; coal, £20,788; and drapery and apparel, £5,778; together £79,294, out of total exports to the amount of £152,451. Most of the other articles are foreign manufactured, chiefly the produce of Great Britain.

NEW ZEALAND.

New Zealand gave promise at a former period of being one of the leading customers of this colony; but from various causes both the imports and the exports fell away very considerably. The export trade in commodities shows but little sign of recovery, the large increase in the values of late years being due to shipments of gold coin; while the value of the imports fluctuates with the character of the season in New South Wales, a bad year being always attended with large importations of New Zealand wheat, oats, and other produce. The following table shows the imports and exports for a series of years:—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1870	298,951	197,025	1891	871,422	280,039
1875	135,480	362,764	1892	717,309	286,059
1880	460,735	525,174	1893	756,433	533,262
1885	899,623	369,055	1894	484,450	770,392
1890	932,073	294,113	1895	563,528	486,173

The imports consist chiefly of gold bullion, timber, and agricultural and dairy produce. The value of the principal articles is given herewith :—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Butter	16,646	7,403	632	......	5,459
Cheese	4,113	997	582	484	3,033
Drapery, apparel, etc.	18,420	13,664	9,213	11,020	13,293
Flour	17,181	17,555	3,049	403	133
Fungus	10,647	4,109	4,884	1,777	812
Gold bars and dust	246,550	231,490	343,718	222,344	299,382
Grain and pulse—					
Wheat	15,417	38,224	31,080	28,351	......
Oats	126,869	119,541	124,475	60,191	60,491
Other	51,113	47,612	22,735	7,004	3,293
Gum	13,445	64	12	688	199
Live stock	19,438	3,696	9,850	44,612	29,902
Malt and hops	7,276	27,466	13,735	15,622	23,527
Meat (preserved)	13,158	3,059	1,062	195	600
(Bacon, etc.)	18,152	10,355	2,523	3,292	3,021
Oatmeal	10,599	27,389	4,177	2,248	1,851
Oysters	5,392	3,575	2,160	3,600	2,935
Phormium tenax	10,889	6,888	10,480	6,619	5,706
Potatoes	57,079	56,165	17,313	3,497	5,854
Timber	97,983	55,498	68,852	60,622	63,758

In 1883 direct steam communication was established between New Zealand and Great Britain; this, together with the large falling off in the export of specie, will account for the contraction of the outward trade which took place between that year and 1892. The value of the principal articles exported to New Zealand during each of the past five years was as follows :—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Coal	90,662	72,450	68,433	60,767	50,347
Coin (gold)	......	25,000	225,000	445,000	140,018
Drapery and apparel	17,170	24,344	18,366	14,418	15,256
Fruit (fresh)	15,426	12,388	27,326	27,386	17,854
Manures	12,480	20,114	18,587	21,226	27,405
Paper, books, stationery, etc.	15,642	5,696	4,993	4,223	7,001
Sugar (raw)	8,508	366	19,435	42,961	9,921
Timber	8,349	8,349	7,603	10,437	10,521

OTHER BRITISH POSSESSIONS.

Besides the Australasian colonies and Great Britain, the only other British possessions that have a trade with New South Wales at all considerable are Hong Kong, India, and Fiji; although during the last few years the trade with Ceylon and Canada has been steadily increasing. The value of the imports and exports of each of the three first-named colonies during 1875, and at subsequent periods, was as follows :—

Year.	Hong Kong.		India.		Fiji.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	£	£	£	£	£	£
1875	117,881	172,676	12,295	10,958	32,345	63,033
1880	228,526	137,577	653	19,611	54,135	120,518
1885	340,187	246,032	117,208	130,292	192,540	128,643
1890	271,730	255,050	195,368	253,280	99,853	98,951
1891	273,383	282,309	260,307	127,388	89,859	103,773
1892	239,606	254,615	180,499	50,923	70,121	100,089
1893	191,477	182,502	184,261	37,173	56,012	131,403
1894	182,496	162,167	201,805	36,991	45,039	117,840
1895	181,529	141,976	212,337	54,407	27,890	86,420

Hong Kong commercially is a port of China, and no inconsiderable portion of the trade of that Empire with New South Wales is transacted *via* that port. The China trade is of a variable nature, the total of the direct trade for 1895 being only £141,813, as against £324,709 in 1885; while the trade *via* Hong Kong in 1895 was £323,505 as against £586,219 ten years previously. The imports from Hong Kong during 1895 consisted principally of opium valued at £28,056, tea at £25,075, rice at £33,461, tobacco at £3,295, silks at £7,178, China oil at £3,749, flax and hemp at £10,400, and mats and matting at £839. The export trade for the year chiefly comprised the following items :— Coin to the amount of £115,631; coal, £12,398; bêche-de-mer, £1,057; fungus, £594; lead, £1,921; and old metal, £3,652.

The Indian trade has grown up almost entirely since 1880, in which year it amounted to only £20,264, increasing to £422,137 in 1884. Since that period the trade has greatly fluctuated, owing largely to the variable export of coin. During 1890, it reached a total of £448,648, the highest yet attained; but during the next three years it steadily declined, although in 1894 it showed an upward movement, the improvement being maintained in 1895, when the value was £266,744. Castor oil is an article very largely imported from India, the value of the oil received during 1895 being £21,480. There is also a large trade in woolpacks, the importations amounting to £46,748; and in bags and sacks, of which goods to the amount of £53,436 were received. The only other articles imported during 1895 in any quantity were rice, £6,363; and tea, £64,152. The outward trade with India in most years is confined almost entirely to coin, coal, and copper. During 1895 the export of gold amounted to £19,456, the other principal articles exported being coal, £16,574; horses, £12,765; scoured wool, £3,685; and copper, £190, the five items mentioned comprising a value of £52,670, out of a total export trade during 1895 of £54,407. The great falling off noticeable since 1890 is due to the decline in the amount of gold coin and bullion exported. In that year the value of gold exported was £203,299, and in 1891 only £87,361, while in 1894 there was no export of gold, and in 1895 an export of only £19,456.

The Fiji Island trade is valuable, but, like the trade with other colonial possessions, is rather unsteady. In 1875 the imports from these Islands were valued at £32,345, and the exports at £63,033, being a total of £95,378; while in 1895 the imports were only £27,890 in value, and the exports had risen to £86,420, the total trade thus being £114,310. The imports were highest in 1885, when they were valued at £192,540. The exports reached their highest total in 1883, when they amounted to £248,380; from that time there was a steady decline until 1887, when the lowest figure was reached. Since then the exports have gradually recovered, and the figures for 1893 were the highest recorded for a number of years, but the trade declined in 1894, and still further in 1895.

The rise of a trade with the Canadian Dominion and Ceylon may be traced in the following table, which gives the imports and exports for 1875 and following periods:—

Period.	Canadian Dominion.		Ceylon.	
	Imports.	Exports.	Imports.	Exports.
	£	£	£	£
1875	....	....	....	2,059
1880	17,530	....	....	1,781
1885	62,847	....	17,701	8,531
1890	18,784	10	43,702	4,080
1891	32,864	40	55,544	631
1892	10,655	37	50,725	8,975
1893	33,316	8,374	70,991	2,052
1894	52,740	14,523	81,146	2,822
1895	61,742	16,804	94,595	2,055

For a number of years prior to 1893 there was a fair import trade in lumber with Canada, but the establishment of a direct line of steamers between Sydney and Vancouver in that year had the effect of increasing the number of articles imported, and of laying the foundation of an export trade, which until that time was practically non-existent. The principal articles imported in 1895 were timber, £21,164; machinery, £13,112; paper, books, etc., £6,137; fish (fresh, dried, and preserved), £5,002; hardware and ironmongery, £2,830; drapery and apparel, £3,456; and drugs and apothecaries' wares, £1,938—making a value of £53,639, out of a total of £61,742. The chief article of export was tin in ingots, to the value of £5,001; the other principal items being skins and hides, £3,280; sugar, £2,046; preserved meat, £1,656; coal, £880; butter, £802; and fruit, £396. These are small beginnings, but the trade may be expected to show a large increase during the next few years.

Of late years there has been a marked tendency to substitute for Chinese teas the product of Ceylon and India, and it is entirely due to this fact that the import trade with the island has made the steady progress shown in the above table. In 1895 the tea imported from Ceylon was valued at £82,460, out of a total of £94,595; the other principal imports being coffee, £6,037; fibre, £2,152; and oilmen's stores, £1,779. The chief exports were coal, £896; horses, £400; and kerosene shale, £118.

TRADE WITH THE UNITED KINGDOM AND ITS POSSESSIONS.

To what extent the trade of the colony follows the British flag may be gathered from the following figures, which show not only the value of the trade of New South Wales with Great Britain and her dependencies during the period since 1870, but also the proportion which that trade bears to the whole. A fairly steady proportionate decline is apparent in the exports since 1886, which was about the period when direct trade with Continental Europe was established:—

Year.	Imports from Great Britain and British Possessions.	Percentage of total imports.	Exports to Great Britain and British Possessions.	Percentage of total exports.
	£		£	
1870	6,924,998	83·59	7,687,148	95·72
1875	12,563,296	93·13	13,213,258	96·65
1880	13,021,783	91·85	15,210,314	97·00
1885	21,299,715	89·74	14,794,052	88·33
1886	19,153,071	89·86	14,250,570	90·66
1887	17,564,948	91·62	16,485,109	89·00
1888	19,034,772	89·66	18,508,498	88·47
1889	20,198,508	88·34	20,281,259	87·06
1890	20,273,053	89·64	18,582,372	84·29
1891	22,474,355	88·54	21,066,606	81·20
1892	18,662,883	89·83	17,053,145	77·61
1893	16,679,402	92·11	18,569,809	81·02
1894	14,386,013	91·04	16,506,202	80·21
1895	14,352,796	89·75	17,323,106	78·98

FOREIGN TRADE.

The total value of the trade of the colony with countries other than those under British dominion shows a large increase since 1886, as will be seen from the subjoined table. The import trade is marked by fluctuation; but the export trade has been more regular, and shows a considerable increase during the past ten years, due to the establishment of direct trade with France, Belgium, and Germany. The large decline in the value of the imports in 1887 was chiefly due to a falling off in the United States trade, though a sensible decline also took place in the imports from other leading foreign countries. The lost ground was more than recovered in subsequent years; and the great decline in 1893 and 1894, in the exports as well as the imports, was due to causes which affected the whole trade of the colony, though not quite in the same degree as the commerce with foreign countries. In 1895 the trade again showed an upward tendency, the increase being relatively larger than that in the trade with the United Kingdom and British colonies and possessions:—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1886	2,160,056	1,467,367	1891	2,909,042	4,877,414
1887	1,606,369	2,036,641	1892	2,113,643	4,919,102
1888	2,194,505	2,411,632	1893	1,427,633	4,351,414
1889	2,664,549	3,013,675	1894	1,415,928	3,981,471
1890	2,341,951	3,463,565	1895	1,639,619	4,611,679

THE UNITED STATES.

Until 1892 the United States was the largest foreign market of the colony, the value both of the imports and the exports far exceeding that of any other country; but the direct shipments of wool to the Continent of Europe, which are steadily increasing, have placed it below France and Germany. The import trade was marked by a fairly uniform rate of increase until 1886, since which year the value has greatly fluctuated. The export trade also shows great variableness, and depends almost entirely on the demand for gold which prevails in the States. The peculiarity of the trade will, perhaps, be best exemplified in the following table:—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1886	1,018,773	521,216	1891	1,277,032	2,313,671
1887	693,420	934,443	1892	823,522	1,529,980
1888	967,528	1,044,144	1893	526,331	626,566
1889	1,094,697	1,130,589	1894	542,427	374,541
1890	859,102	1,300,375	1895	624,268	683,606

The imports comprise a large number of articles, amongst which the following are the most important:—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Brushware	11,784	5,024	3,832	791	974
Carriages and carriage materials	49,105	33,327	12,751	17,165	17,278
Drugs and apothecaries' ware	29,866	21,846	9,551	9,844	13,002
Fish (preserved)	26,157	27,314	19,028	14,754	19,028
Furniture and upholstery	20,879	13,831	6,117	5,307	4,495
Hardware	104,739	100,203	51,574	21,967	20,208
Iron and steel	14,957	8,573	8,250	6,631	10,536
Kerosene	80,645	49,096	52,411	54,867	71,967
Leather	52,622	18,973	19,393	27,662	22,070
Machinery	65,856	19,762	11,421	14,594	19,930
Malt	30,482	......	26	......	......
Meat (preserved)	11,888	7,958	1,991	1,065	831
Paper, books, stationery, etc.	49,339	46,505	51,189	28,626	34,696
Railway plant	172,436	8,214	1,845	2,494	2,996
Sewing machines	33,627	21,182	6,476	21,120	13,578
Silver plate and plated ware	11,075	5,557	2,231	2,990	2,529
Sugar (raw)	11,033	......	......	......	......
Timber—dressed and undressed	196,570	134,503	58,738	55,203	82,979
Tobacco, cigars, etc.	74,467	45,689	28,032	32,848	47,508
Turpentine	14,949	6,625	5,032	5,023	10,460
Watches and clocks	21,322	16,929	6,140	6,216	8,246

The other articles imported are mostly manufactured goods. In most years there has been a fairly large import of breadstuffs from the United States, and during 1886 the value of such imports was £96,216; in 1889 the value of flour imported reached £54,490, and of wheat, £142,397; but in 1895 the imports of grain and pulse of all kinds only amounted to £781.

The exports to the United States are chiefly confined to specie and a few articles of raw material, the produce [illegible] of which are coal, tin, wool, and mar[illegible] exported in considerable quantities. During the last five years the value of the export of the principal articles was :—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Gold (bars and dust) ..	50,670	....	16,473	....	....
Gold (coin)..................	1,660,000	986,000	285,600	100,218	100,000
Coal	200,851	142,270	111,240	112,271	106,940
Tin	75,410	72,889	70,584	28,484	44,768
Skins (chiefly marsupial)	169,001	234,290	89,736	43,749	200,998
Wool	131,024	51,591	17,572	79,336	218,679
Shale	7,437	3,354	1,752	418	804

For some years past there has been a considerable export of gold to America; the quantity sent away during 1892 and the two previous years was especially large, but it has fallen off considerably since. The value of the precious metal, both coined and uncoined, exported during the last ten years was :—

Year.	Value.	Year.	Value.
	£		£
1886	229,137	1891	1,710,670
1887	651,612	1892	986,000
1888	578,488	1893	302,073
1889	751,220	1894	100,218
1890	1,016,940	1895	100,000

BELGIUM.

The direct trade between this colony and Belgium began in 1881, and may, to a large extent, be attributed to the International Exhibition held in Sydney during 1879–80. In the year mentioned the combined imports and exports amounted to only £26,237, while in 1893 they had risen to £1,250,720, although in 1895 they were only valued at £931,114. This cannot but be regarded as an enormous increase in so short a time. In point of value the Belgian trade of the colony is larger than that of any other foreign country, Germany, France, and the United States excepted; but the port of Antwerp, which receives the bulk of the trade, is a distributing centre for a great part of the wool destined for French, German, and other Continental markets, and it is not possible to say how much of the goods shipped to Belgium are for local requirements.

The imports from Belgium comprise a large number of articles. Iron in its various manufactures, principally in bars, plate, and wire, forms a very large proportion of the total imports, and glassware, candles, cigars, cement, and starch are all imported to some extent, though the trade in each commodity is subject to considerable fluctuation.

The outward trade with Belgium is confined almost entirely to wool, though some tallow is also exported. During 1895 the amount of scoured and washed wool sent to Belgian ports was 3,205,651 lb., valued at £124,154, and 23,478,383 lb. of greasy wool of the value of £626,782, making a total of £750,936. Belgium is, therefore, next to Great Britain, France, and Germany, the largest purchaser of New South Wales wool. The following table shows the import and export trade with Belgium since 1885 :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1886	173,831	424,938	1891	188,277	1,039,333
1887	37,735	557,710	1892	227,363	951,570
1888	64,766	723,286	1893	129,114	1,121,606
1889	88,843	725,687	1894	115,119	1,121,822
1890	130,819	1,011,864	1895	150,288	780,826

GERMANY.

A large trade has been maintained with Germany since 1879. Direct communication was established in 1887 by the North German Lloyd's Company, of Bremen, and further extended by a line of German cargo boats trading between Hamburg and Sydney since 1888. This trade has attained considerable dimensions, and now exceeds that with any other foreign country. The following table shows the values of the principal articles imported from Germany during the last five years :—

Description of Goods.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
Apparel, drapery, boots, etc. ...	149,768	98,836	77,703	46,545	72,747
Beer ...	6,893	4,995	6,254	6,411	9,090
Books, paper, stationery, etc. ...	16,422	9,470	7,254	12,610	11,036
Candles ...	30,289	7,910	4,982	4,949	6,998
Cement ...	32,783	17,559	5,159	1,463	25,498
Furniture ...	36,649	38,272	15,498	3,279	5,308
Glass and glassware ...	21,191	13,073	9,009	9,953	12,200
Iron and iron manufactures ...	95,487	95,578	40,051	47,467	49,972
Machinery ...	22,119	7,323	6,486	3,493	2,760
Musical instruments ...	72,251	60,633	28,930	23,820	34,989
Sewing machines ...	9,625	7,846	3,664	2,700	5,481
Spirits ...	55,803	40,862	35,997	15,799	34,576
Sugar ...	22,276	7,494	1,927	306	2,271
Telegraphic material ...	11,014	2,955	1,237	4,500	4,163
Tobacco, cigars, and cigarettes ..	42,784	34,350	22,704	16,971	12,556
Toys and fancy goods ...	33,131	29,120	18,961	18,424	21,364

The exports consist almost entirely of wool, the value of which, in 1895, was £1,081,821, out of a total export of £1,141,661. The only other items of a considerable value exported d[illegible]95 were tallow

£7,212; skins and hides, £12,123; and silver ore, £4,470. The increase in the wool export during the last few years is chiefly due to the greater facilities now existing for direct shipment:—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1886	361,612	54,471	1891	773,016	437,522
1887	296,952	100,012	1892	581,402	1,017,456
1888	481,009	128,546	1893	373,233	979,898
1889	533,082	519,435	1894	345,364	917,310
1890	639,475	404,280	1895	425,697	1,141,661

FRANCE AND NEW CALEDONIA.

The French trade has risen in importance since 1881, a result almost entirely due to the establishment of direct communication between this Colony and the Republic by the Messageries Maritimes Company, but it has been accompanied by a corresponding falling off in the trade with New Caledonia, the chief dependency of France in the South Pacific. Thus while in 1886 the total value of French imports and exports amounted to only £365,702, as against £1,512,785 in 1895, that of New Caledonia fell during the corresponding period from £176,284 to £99,689.

Wearing apparel and drapery form in most years the largest class of imports from France; the imports of drapery and silk amounted in 1895 to £7,231, of apparel to £3,620, and of boots to £1,926. In 1895, however, these goods were surpassed by wines and spirits—the import of the former amounting to £3,501, and of the latter to £15,946. Oil to the value of £378; toys and fancy goods, £2,042; and cigars, £11,708; were the only other goods largely imported. Great quantities of French goods are imported from Great Britain; but the indirect trade will ultimately be superseded by direct trade, and the cost of commission and double handling thus saved to the colony.

Wool forms the chief export to France. The value exported during 1895 was £1,189,051—an increase of £328,198 over the export of the preceding year. Sheepskins to the value of £184,887 were also exported. The trade with France since 1886 is shown in the following table:—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1886	216,193	149,509	1891	120,321	480,599
1887	157,732	85,151	1892	77,436	806,693
1888	154,856	120,723	1893	49,436	1,134,072
1889	179,900	104,104	1894	70,649	1,067,440
1890	117,871	233,924	1895	76,663	1,436,122

As already pointed out, New Caledonia is an important market for the produce of the colony, though its value has been considerably affected by the establishment of regular communication between France and her dependency. The trade with New Caledonia reached a value of £176,284 in 1886, produce being imported into New South Wales to the value of £64,952, and exported to the amount of £111,332. Since that year, as will be seen below, the imports and exports show a very considerable decline :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1886	64,952	111,332	1891	48,378	185,768
1887	70,676	137,212	1892	18,242	184,128
1888	68,637	153,957	1893	21,417	89,791
1889	85,582	189,660	1894	25,171	72,732
1890	83,920	193,389	1895	28,345	71,344

CHINA.

With the exception of Chile, with which an export trade to the value of £158,486, chiefly in coal, was transacted in 1895, the only other foreign country whose trade with New South Wales reaches a large figure is China. The imports and exports credited to Hong Kong, however, belong in reality to the country generally, and the diminution which has taken place in the China trade since 1881 is to be attributed in no small degree to the transference of part of the trade from the ports of the Empire to Hong Kong. Still, when allowance is made on this score, it will be found that the actual loss of trade is by no means inconsiderable. The main import from China is tea, which exhibits a falling off, the decline being attributable to the larger consumption of Indian and Ceylon teas, the imports of which have largely increased of late years. The direct export trade has never been great. To correctly gauge the commercial relations between this colony and China, the trade of Hong Kong should be considered in conjunction with the figures given below :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1886	195,930	16,462	1891	270,929	12,164
1887	251,722	14,510	1892	217,996	9,810
1888	309,934	7,651	1893	164,481	5,609
1889	257,353	11,587	1894	131,006	7,581
1890	241,840	1,037	1895	133,870	7,943

On the 5th August, 1852, what is known as the E. Deas-Thomson tariff came into effect. The duties were made uniform for all countries trading with the colony, the differential treatment of British goods being done away with. The tariff was as follows:—

Articles.	Rate of Duty.
Ale and Beer in wood	⅌ gallon, 1d.
„ in bottle	„ 2d.
Coffee, chocolate, and cocoa	⅌ lb., ¾d.
Dried fruits	„ ½d.
Brandy and gin	⅌ proof gal., 6s.
Whisky, rum, and all other spirits	„ 4s.
Perfumed spirit	⅌ gallon, 4s.
Cordials	„ 6s.
Refined sugar	⅌ cwt., 3s. 4d.
Unrefined sugar	„ 2s. 6d.
Molasses	„ 1s. 8d.
Tea	⅌ lb., 3d.
Manufactured tobacco, until 31 December, 1853	⅌ lb., 1s. 6d.
„ after 31 December, 1853	„ 1s.
Unmanufactured tobacco, to 31 December, 1853	„ 1s.
„ after 31 December, 1853	„ 8d.
Cigars and Snuff	„ 2s.
Wine, in wood or bottle	⅌ gallon, 1s.
Colonial distilled spirit	⅌ proof gal., 3/8

The duties remained untouched for two years, when the charges on spirits were increased as follows, as from November 10, 1854:—

Articles.	Rate of Duty.
Brandy and gin	⅌ proof gal., 9s.
Whisky, rum, and other spirits	„ 6s.
Perfumed spirit	⅌ gallon, 6s.
Cordials	„ 9s.
Colonial distilled spirit	⅌ proof gal., 5/8

From the 14th September, 1855, the following revised scale of duties was imposed:—

Articles.	Rate of Duty.
Brandy and gin	⅌ proof gal., 10s.
Whisky, rum, and all other spirits	„ 7s.
Perfumed spirits	⅌ gallon, 7s.
Cordials	„ 10s.
Wine	„ 2s.
Ale and beer, in wood	„ 1d.
„ in bottle	„ 2d.
Tea	⅌ lb., 3d.
Sugar, refined and candy	⅌ cwt., 6s. 8d.
„ unrefined	„ 5s.
Treacle and molasses	„ 3s. 4d.
Coffee and chicory	⅌ lb., 2d.
Cigars	„ 3s.
Tobacco and snuff	„ 2s.
Colonial spirits distilled from sugar	⅌ proof gal., 6/5

This tariff remained in force for ten years; the only changes made were that opium was added to the list of dutiable goods at 10s. per lb., and unmanufactured tobacco was charged from 1st January, 1862, with duty at the rate of 1s. per lb. instead of 2s. On the same date an export duty was levied on gold at the rate of 2s. 6d. per oz., but on the 13th October this export duty was reduced to 1s. 6d. per oz., and continued in force for seventeen years, the duty being abolished 10th July, 1879. A poll-tax of £10 was levied on Chinese from 22nd November, 1861.

The next alteration in the tariff was the imposition of a duty of 1s. per package on all goods imported into the colony, excepting live stock, flour, wheat, sugar, tea, and goods in transit. These duties were in addition to existing duties, and were chargeable until the close of the year 1867. They were followed by an all round increase of 20 per cent. in the duties payable in respect of all goods imported for home consumption, with the exception of tea, sugar, brandy, and gin. These additional duties remained in force until the 29th November, 1865, when a new tariff was imposed. The Act sanctioning the tariff was assented to on the 19th January, 1866; that is, about seven weeks after the duties were collected. The tariff as amended was as follows:—

Articles.		Rate of Duty.	
Tea		⅌ lb.,	3d.
Sugar	refined	⅌ cwt.,	6s. 8d.
	unrefined	,,	5s.
	molasses	,,	3s. 4d.
Coffee and chicory		⅌ lb.,	2d.
Tobacco	manufactured, and snuff	,,	2s.
	unmanufactured	,,	1s.
	cigars	,,	3s.
Spirits and spirituous compounds		⅌ gallon	10s.
Wines		,,	3s.
Ale and porter	in bottle	,,	6d.
	in wood	,,	3d.
Malt		⅌ bushel,	6d.
Hops		,,	2d.
Opium		⅌ lb.,	20s.
Rice		⅌ ton,	40s.
Dried fruits		⅌ cwt.,	10s.

On all other goods except those on the free list an *ad valorem* duty of 5 per cent. was chargeable. The free list comprised flour, wheat, animals, fresh fruits, wool, tallow, and some other articles, chiefly of re-export. The package duty was continued, as well as the duty of £10 levied on Chinese males arriving in the colony, and the excise duty on colonial distilled spirits was raised to 9s. 5d. per gallon. The poll-tax on Chinese was repealed on 20th November, 1867, and for the next fourteen years the immigration of these aliens was unrestricted.

A further important change in the tariff was made, dating from the 22nd May, 1871. The number of articles subject to specific duties was very largely increased, and the 5 per cent. *ad valorem* duties were continued; but there was a much larger free list, introduced, it was stated, for the purpose of lightening as much as possible the South Sea Island trade. The *ad valorem* duties were abolished on the 1st January, 1874, and the number of articles liable to specific duty was reduced. The next twelve and a half years saw little alteration in the body of the tariff; the changes made being chiefly in the direction of increasing the duties on wines, spirits, and tobacco. From the 10th December, 1879, the spirit duties stood as follow:—

Articles.	Rate of Duty.	
Spirits and spirituous compounds	⅌ proof gall.,	12s.
Colonial distilled spirits	,,	12s.
Sparkling wine	⅌ gallon,	10s.
Other wine	,,	5s.

An Act taking effect from the 20th February, 1884, imposed a duty of 1d. per lb. on stearine, and established the following duties on tobacco:—

Articles.	Rate of Duty.	
Cigarettes	⅌ lb.,	6s.
Cigars	,,	6s.
Manufactured tobacco and snuff	,,	3s.
Unmanufactured tobacco for manufacturing purposes..	,,	1s.

The same Act increased the duty on opium to 20s. per lb., and was followed by the imposition of an excise duty on locally-made tobacco of 1s. per lb., and on cigars and cigarettes of 2s. 6d. per lb.

In 1886 a considerable change was made in the tariff. From the 7th April the articles liable to fixed duties were largely increased in number, and the 5 per cent. *ad valorem* duties were reimposed. In the following year (3rd June, 1887) an excise duty of 3d. per gallon was made payable on beer brewed in the colony, and on the 8th July the excise on locally-made tobacco was increased to 1s. 3d. per lb.

The specific and *ad valorem* duties imposed in September, 1886, were repealed on the 8th July, 1887, the repeal as regards malt and hops taking effect from 1st May, and for other duties from 1st October, 1887. The new schedule of duties which came into operation was much like the tariff existing prior to the changes of 1886, but the duty payable on spirits, both local and imported, was increased to 14s. per proof gallon, and on spirituous compounds to 14s. per liquid gallon.

In March, 1892, the tariff was again altered. The number of articles subject to specific duties was largely increased, and *ad valorem* duties of 10 and 15 per cent. were imposed; there was, however, a considerable free list. The duties took effect as from the 2nd December, 1891. After an existence of four years this tariff was abolished, and an entirely new system of duties came into force with the first day of 1896. The *ad valorem* duties were absolutely repealed, as well as the great bulk of the specific duties; the duties on narcotics and spirituous liquors were retained as a permanent tariff; and certain other duties were to be maintained for a certain period, after which they were to cease. The following are the Customs duties now in force:—

PERMANENT TARIFF.

	Articles.	Rate of Duty.	
Spirits	On all kinds of spirits and spirituous compounds imported, and not otherwise enumerated	℘ proof gall.,	14s.
	No allowance beyond 16·5 shall be made for the underproof of any spirit of a less strength than 16·5 underproof.		
	Case spirits—Contents of two, three, four, or five gallons shall be charged—		
	Two gallons and under as two gallons.		
	Over two gallons and not exceeding three as three gallons.		
	Over three gallons and not exceeding four as four gallons.		
	Over four gallons and not exceeding five as five gallons.		
	Bitters, essences, fluid extracts, sarsaparilla, tinctures, medicines, infusions, and toilet preparations containing—		
	Not more than 25 per cent. of proof spirit	℘ gall.,	3s. 6d.
	Not more than 50 per cent. of proof spirit	,,	7s.
	Not more than 75 per cent. of proof spirit	,,	10s. 6d.
	If containing more than 75 per cent. of proof spirit ...	,,	14s.
	If containing spirit overproof to be charged as spirituous compounds	℘ proof gall.,	14s.
	Methylated spirit	℘ gallon,	1d.
	Perfumed spirits, perfumed waters, Florida water and bay rum	℘ liquid gall.,	20s.
Wines	Sparkling—For six reputed quarts, or twelve reputed pints	......	10s.
	Other kinds	℘ gallon,	5s.
	Other kinds—For six reputed quarts, or twelve reputed pints	......	5s.
Beer, ale, porter, spruce, or other beer, cider, and perry.	In wood or jar	℘ gallon,	6d.
	In bottle	,,	9d.
	For six reputed quarts, or twelve reputed pints	,,	9d.
Tobacco	Delivered from ship's side or from a Customs Bond for home consumption—manufactured, unmanufactured, and snuff	℘ lb.,	3s.
	Unmanufactured, entered to be manufactured in the colony. At the time of removal from a Customs Bond or from an importing ship to any licensed tobacco manufactory for manufacturing purposes only into tobacco, cigars, and cigarettes	,,	1s.
	Sheepwash	,,	3d.
Cigars and cigarettes (including wrappers in latter case)		,,	6s.
Opium and any preparation thereof		,,	20s.

DIMINISHING DUTIES.

Candles per lb., or reputed package of that weight, and so in proportion for any such reputed weight, night lights, and stearine	⅌ lb.,	1d.
From 1st July, 1897	,,	½d.
,, ,, 1899	Free.	
Oil, kerosene, naphtha, and gasoline	⅌ gallon,	6d.
From 1st July, 1896	,,	3d.
,, ,, 1897	Free.	
Oils, except linseed oil (raw or boiled), fish and seal oils, black whale, cocoanut, sperm, palm, and essential oils	⅌ gallon,	6d.
From 1st July, 1896	,,	3d
,, ,, 1897	Free.	

Sugar—Refined.	Sugar—Raw, and Solid Glucose.	Molasses and Treacle—Glucose, Liquid, and Syrup.	Date.
per cwt. s. d.	per cwt. s. d.	per cwt. s. d.	
6 8	5 0	3 4	Until 30th June, 1897.
5 4	4 0	2 8	From 1st July, 1897.
4 0	3 0	2 0	From 1st July, 1898.
2 8	2 0	1 4	From 1st July, 1899.
1 4	1 0	0 8	From 1st July, 1900.
Free.	Free.	Free.	From 1st July, 1901.

Articles.	Rate of Duty.	
Biscuits	⅌ lb.,	1d.
From 1st July, 1898	,,	½d.
From 1st July, 1900	Free.	
Confectionery (including cakes, comfits, liquorice, liquorice paste, lozenges of all kinds, cocoanut in sugar, sugar-candy, succades, and sweetmeats)	⅌ lb.,	2d.
From 1st July, 1898	,,	1d.
From 1st July, 1900	Free.	
Fruits—Dried, candied and prunes (exclusive of dates)	⅌ lb.,	2d.
From 1st July, 1898	,,	1d.
From 1st July, 1900	Free.	
Jams and Jellies—per lb. or reputed package of that weight, and so in proportion for any such reputed weight	⅌ lb.,	1d.
From 1st July, 1898	,,	½d.
From 1st July, 1900	Free.	
Preserves and canned fruits, fruits boiled, peel drained, or dry	⅌ lb.,	1d.
From 1st July, 1898	,,	½d.
From 1st July, 1900	Free.	

CUSTOMS REVENUE.

The amount of revenue collected by the Customs, including excise, etc., during each of the last five years, is given in the following table :—

Particulars of Receipt and Rate of Duty.			Amount Collected.				
			1891.	1892.	1893.	1894.	1895.
IMPORT DUTIES.			£	£	£	£	£
Spirits	⅌ gallon,	*20s.	412	4,392	3,907	4,882	4,786
	,,	15s.	5,049	......	......	......	......
	,,	14s.	864,052	808,019	680,335	651,870	636,488
Methylated Spirits ..	,,	4s.	4,486	......	......	......	......
	,,	1s.	......	1,764	1,251	1,252	1,451
Wine—Still	,,	5s.	38,036	29,890	21,672	17,941	17,217
Wine—Sparkling	,,	10s.	11,332	8,770	5,828	5,861	6,092
Ale and beer in wood...	,,	6d.	25,440	24,750	20,658	21,747	21,205
Ale and beer in bottle...	,,	9d.	55,563	46,998	27,781	32,825	30,341
Tobacco—Manufactured	⅌ lb.,	3s.	140,716	151,568	140,289	135,189	138,204
Tobacco in leaf	,,	3s.	512	879	573	821	1,672
Tobacco for Manufacturing purposes only....	,,	1s.	31,957	30,624	29,707	26,761	31,552
Cigars	,,	6s.	81,308	71,923	59.273	55,329	55,299
Cigarettes	,,	6s.	23,214	21,946	17,888	17,864	20,765
Sugar—Refined	⅌ cwt.,	6s. 8d.	815	999	486	518	743
Sugar—Raw	,,	5s.	87,481	75,837	68,827	95,344	89,549
Molasses	,,	3s. 4d.	883	925	1,141	961	597
Sugar, Refined, ex Refinery	,,	6s. 8d.	433	400	550	691	333
Sugar, Raw, ex Refinery	,,	5s.	42,450	54,525	34,775	62,070	39,490
Molasses ex Refinery ...	,,	3s. 4d.	3,200	4,000	4,000	4,233	6,200
Tea	⅌ lb.,	3d.	120,326	†4,009	......	......	......
Coffee	,,	3d.	6,422	‡574	......	......	§16
	,,	6d.	2,733	1,543	819	558	304
Chicory	,,	3d.	115	11	4	11	20
	,,	6d.	593	519	193	36	25
Opium	,,	20s.	29,022	15,869	17,819	16,208	15,719
Rice	⅌ ton,	60s.	16,928	15,327	15,869	15,514	16,004
Dried Fruits	⅌ lb.,	2d.	59,298	54,950	51,844	48,966	58,993
Timber—Rough	⅌ 100 ft. sup.,	1s. 6d.	64,233	47,945	41,848	39,737	35,780
Timber—Dressed.......	,,	3s.	23,186	14,750	10,746	10,808	10,263
Kerosene..............	⅌ gallon,	6d.	44,066	45,185	48,829	52,226	53,582
*Flour.............. ..	⅌ cental,	1s.	1,379	48,138	26,624	32,825	17,423
*Wheat	,,	10d.	645	23,593	11,827	6,405	8,970
Duty collected on Samples of Spirits........			118	149	110	132	115
Other Specific Duties			336,717	425,906	320,468	287,010	324,490
Ad valorem Duties	*10 per cent.		31,470	538,872	387,896	353,825	344,699
	*15 ,,		9,030	88,681	61,106	60,510	59,120
TOTAL IMPORT DUTIES			2,163,620	2,664,230	2,114,943	2,060,930	2,047,507
EXCISE.							
Colonial Distilled Spirits	⅌ gal.,	14s.	23,806	21,132	18,165	14,694	8,606
Excise on Tobacco	⅌ lb.,	1s. 3d.	123,937	122,789	111,035	108,281	117,734
Excise on Cigars and Cigarettes..	,,	2s. 6d.	7,425	10,265	13,188	15,011	17,183
Excise on Beer.....	⅌ gal.,	3d.	132,425	135,090	121,915	118,855	122,773
Tobacco Factory License Fees..............			1,265	1,265	1,201	1,244	1,356
TOTAL EXCISE....................			288,858	290,541	265,504	258,085	267,652

* From 2nd December, 1891.
† To 1st March, 1892 ; free from that date.
‡ On free list from 1st April, 1892 ; amount collected refunded.
§ From 10th to 16th May, 1895 ; amount collected refunded.

Particulars of Receipt.	Amount Collected.				
	1891.	1892.	1893.	1894.	1895.
MISCELLANEOUS COLLECTIONS.	£	£	£	£	£
Tax on Chinese	100	100	700	300	200
Bonded Warehouse License Fees	8,575	9,872	10,255	10,146	10,530
Rent of Goods in Queen's Warehouse	63	71	47	34	51
Pilotage	40,612	38,426	29,185	31,402	31,261
Harbour and Lights Rates	20,831	20,610	17,280	21,212	22,679
Removal Dues	5,398	4,474	3,044	4,836	5,042
Shipping Fees (at ports other than Sydney or Newcastle)	......	......	......	10	7
Attendance of Officers superintending repacks	......	......	......	20	917
Crown's Share of Seizures and Penalties*	1,230	1,315	2,370	669	274
Surplus Proceeds, Sale of Overtime Goods*	479	363	265	246	296
Tonnage Rates at Newcastle	9,257	8,352	7,260	8,334	8,692
Tobacco—Licenses to Sell	626	603	638	573	635
Miscellaneous	......	......	......	3	......
Sundries*	336	659	1,492	1,022	358
TOTAL MISCELLANEOUS COLLECTIONS......£	87,002	84,845	72,536	78,807	80,942
TOTAL AMOUNT COLLECTED ....£	2,589,480	3,039,616	2,452,983	2,397,822	2,396,101
DRAWBACKS AND REFUNDS ....£	84,805	89,659	52,173	53,957	74,563
NET CUSTOMS REVENUE ....£	2,504,675	2,949,957	2,400,810	2,343,865	2,321,538

* Collected by Customs Department and paid direct into the Treasury.

The revenue derived from imported spirits, inclusive of perfumed spirits and samples, during the past ten years, was :—

Year.	Quantity on which duty was paid.	Duty.	Amount of duty collected.
	gallons.		£
1886	1,161,628	12s.	696,977
1887	1,121,101	12s., 14s., 15s.	759,608
1888	1,178,293	14s. and 15s.	806,938
1889	1,164,360	14s. and 15s.	804,426
1890	1,196,561	14s. and 15s.	827,314
1891	1,241,503	14s., 15s., and 20s.	869,513
1892	1,158,703	14s. and 20s.	812,560
1893	975,971	14s. and 20s.	684,352
1894	936,125	14s. and 20s.	656,884
1895	914,054	14s. and 20s.	641,389

Colonial distilled spirits are subject to an excise equal to the duty on imported spirits. In 1886 the quantity entered for consumption was 9,733 gallons, on which a sum of £5,846 was paid; but in 1887, notwithstanding the increased duty levied, the quantity subject to excise increased to 15,762 gallons, and the amount of duty to £10,754. In 1892 the duty collected amounted to £21,132 on 30,187 gallons of spirit distilled, in 1893 to £18,165 on 25,950 gallons, in 1894 to £14,694 on 20,991 gallons, and in 1895 to £8,606 on 12,294 gallons, the diminished production of 1895 being due to the closing of the only distillery in the colony in the middle of the year.

Still wine is subject to an import duty of 5s. per gallon, and sparkling wine to 10s. per gallon. The import of the first-named is now less than it was ten years ago, and the Customs revenue derived from this article has considerably declined. The amount of still wine imported during 1895 was 68,868 gallons, on which £17,217 duty was paid. The quantity of sparkling wine on which duty amounting to £6,092 was collected was 12,184 gallons. The growing favour in which Australian wine is held, and the general depression, which has limited the amount of money available for luxuries of this kind, have had the effect of reducing the importations of foreign wine.

The import of ale and beer was larger during 1891 than in any previous year, the quantities of beer imported, on which duty was paid, being 1,017,617 gallons in wood, and 1,481,681 gallons in bottle, or a total of 2,499,298 gallons; in 1895 the figures had fallen to 848,200 gallons and 809,093 gallons respectively, paying duty to the amount of £51,546, at the rate of 6d. per gallon for beer in wood or jar and 9d. for bottled. The excise duty on beer brewed in the colony is at the rate of 3d. per gallon. It was first collected for the second half-year of 1887, and amounted to £63,565, the quantity on which duty was paid being 5,085,217 gallons; in 1892, excise duty amounting to £135,090 was collected on 10,807,200 gallons; in 1893, £120,915 on 9,753,200 gallons; in 1894, £118, 855 on 9,508,400 gallons; and in 1895, £122,773 on 9,821,840 gallons. As a set-off against the duty thus imposed, no duties are levied on hops and malt.

The duties levied on tobacco imported into the colony are, on the manufactured article, 3s. per lb.; on tobacco for manufacturing purposes if delivered from bond to any licensed tobacco manufactory, 1s. per lb.; on the leaf if delivered from bond for home consumption, and not to any licensed factory, 3s.; and on cigars and cigarettes, 6s. The excise on tobacco made in the colony is 1s. 3d. per lb., and on cigars and cigarettes, 2s. 6d. The total amount of import duties collected on tobacco and cigars during 1895 was £247,492, which was more by £11,528 than the amount collected in 1894.

In 1884 excise duties were first levied on tobacco manufactured in the colony. The amount collected annually during the last ten years was :—

Year.	Tobacco.	Cigars and Cigarettes.	Year.	Tobacco.	Cigars and Cigarettes.
	£	£		£	£
1886	102,212	668	1891	123,937	7,425
1887	127,545	1,284	1892	122,789	10,265
1888	128,899	1,038	1893	111,035	13,188
1889	123,212	1,150	1894	108,281	15,011
1890	118,287	2,806	1895	117,734	17,183

For a few years after the duty was increased in 1886 the revenue derived from the imported leaf steadily declined, its place being supplied by leaf grown in the colony. To meet this falling off, the excise duty levied on colonial-made tobacco entered for home consumption was increased, in March, 1887, from 1s. to 1s. 3d. per lb. If the American leaf, which is subject to a duty of 1s. per lb., were used exclusively in the manufa of tobacco in the local factories, the actual duty paid on the finished product would have been, previous to the alteration in the tariff, 2s. per ℔., and 2s. 3d. since the alteration, as against 3s. for the imported article. But imported leaf is by no means exclusively employed—large quantities of locally-grown leaf are used, and the absolute amount of duty paid per lb. on the tobacco made in the Colony, otherwise than cigars and cigarettes, was 1s. $5\frac{7}{25}$d. in 1887, 1s. $6\frac{1}{2}$d. in 1888, 1s. $6\frac{13}{30}$d. in 1889, 1s. $6\frac{7}{12}$d. in 1890, 1s. $6\frac{9}{10}$d. in 1891, 1s. $6\frac{3}{4}$d. in 1892, 1s. 7d. in 1893, 1s. $6\frac{3}{4}$d. in 1894, and 1s. 7d. in 1895. This subject is more fully dealt with in the subsequent chapter on "Agricultural Production."

The duty on tea, which was 3d. per ℔., was abolished in March, 1892. The amount of revenue per head derived from the duty varied very little from year to year, being a little over £100,000. The great increase shown in 1891 is attributable to withdrawals from bond in expectation of an increase of duty which was not imposed. The revenue received from this source for the ten years from 1883 and 1892 was:—

Year.	Amount.	Year.	Amount.
	£		£
1883	75,713	1888	100,617
1884	100,059	1889	108,954
1885	98,915	1890	106,986
1886	105,979	1891	120,326
1887	106,815	1892*	4,009

* To 1st March.

At present refined sugar coming into the colony is subject to a duty of 6s. 8d. per cwt., but this rate will be reduced to 5s. 4d. per cwt. on the 1st July, 1897. The Commissioners of Customs, however, only include loaf sugar under the heading of refined. The quantity imported during 1895 was 3,228 cwt., paying duty to the amount of £1,076. Duty is levied on raw sugar, which includes all the ordinary sugar of trade, at the rate of 5s. per cwt., which will be reduced to 4s. on the 1st July, 1897. Notwithstanding this duty, and the large area of the colony adapted for sugar-growing, the imports are considerable. The revenue from raw sugar is shown in the following table:—

Year.	Quantity.	Amount.	Year.	Quantity.	Amount.
	cwt.	£		cwt.	£
1886	484,592	121,148	1891	519,725	129,931
1887	520,192	130,048	1892	521,444	130,362
1888	470,668	117,667	1893	414,048	103,602
1889	642,880	160,720	1894	629,656	157,414
1890	558,540	139,625	1895	516,156	129,039

The other articles in the specific list which produced most revenue in 1895 were fruit, green and preserved, which yielded £79,403; oils, kerosene and other, £66,028; grain, pulse, etc., £63,808; timber, £47,657; hay and chaff, £28,293; potatoes, £25,178; galvanised iron and manufactures, £24,909; salt, £22,321; butter, £18,119; opium, £15,719; cement, £14,820; fish, dried and preserved, £12,662; candles, £9,876; milk, condensed and preserved, £9,848; paper, etc., £9,468; cocoa and chocolate, £8,662; starch, £6,813; molasses, £6,797; onions, £6,147; paints and colours, in oil, £5,685; and other articles, £67,624; these amounts, together with those already given for spirits, wines, beer, tobacco, and sugar, making up the amount of specific duties collected, viz., £1,643,688.

The ten per cent. *ad valorem* duties yielded £344,699, and the fifteen per cent. £59,120, thus bringing the whole import duties to £2,047,507, but drawbacks and refunds were allowed during the year to the amount of £72,680, so that the net amount was £1,974,827. During the same period the excise duties amounted to £267,652, and drawbacks and refunds to £1,428, leaving the net duty £266,224. The net import and excise duties together were £2,241,051.

The following table shows the net Customs' revenue, exclusive of excise, harbour dues, etc., in each colony for the year 1895:—

New South Wales	£1,974,827	Western Australia	614,457
Victoria	1,718,582	Tasmania	303,762
Queensland	1,237,848	New Zealand	1,620,023
South Australia	504,491		

A statement of the amount per head is apt to lead to false conclusions, for it has to be borne in mind that a low consumption of taxable goods under a high tariff may give a revenue per head not greater than a high consumption under a low tariff. Thus Victoria, with a much higher tariff than New South Wales, shows a smaller Customs' revenue per inhabitant.

The gross Customs' revenue collected at Sydney, outports, and inland stations during the year 1895 is shown below:—

Station.	Amount.	Station.	Amount.
	£		£
Sydney	2,023,038	Morpeth	9,252
		Mulwala	3,200
Albury	29,299	Newcastle	155,363
Barringun	2	Richmond River	654
Boggabilla	353	Swan Hill Crossing	2,073
Bourke	15,669	Tocumwal	3,213
Brewarrina	1,990	Tweed River	747
Cobram	1,140	Wallangarra	1,097
Corowa	6,981	Wentworth	11,141
Delegate	8	Wilcannia	10,426
Deniliquin	14,098	Willyama	88,875
Eden	168	Wollongong	64
Euston	857	Paid direct to Treasury	928
Grafton	405		
Howlong	757	Total ... £	2,396,101
Moama	14,303		

Exclusive of the receipts from the public wharves, and of the payments received from the Marine Board, the revenue of the Customs Department in 1895 was £2,253,357; and the expenditure, including the value of the stores and stationery used during the year, £75,540, or £3 7s. for every £100 collected. This average cost, which is 1s. 11d. more than that in 1894, does not include the interest on £186,625, the capital value of the land and buildings occupied in the transaction of the Customs business.

INTERCOLONIAL FREE-TRADE.

With the object of showing the amount which would be lost to the revenue of each colony by the adoption of a Federal Constitution and the establishment of a system of intercolonial free-trade, a laborious analysis has been made of the trade returns of the provinces in 1895, and of the revenue which was collected by each in that year on the produce of its neighbours. The first table shows the value of the domestic produce of each of the seven colonies imported for home consumption by each of the other provinces. Intoxicants and narcotics are shown separately from other goods:—

Importing Colony.	Colony of Origin.							
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Australasia.
	£	£	£	£	£	£	£	£
INTOXICANTS AND NARCOTICS.								
New South Wales ..	....	12,995	1,013	3,212	Nil	193	1,143	18,556
Victoria............	1,082	....	129	2,919	2	21	250	4,403
Queensland	1,408	7,829	....	2,544	Nil.	Nil.	Nil.	11,781
South Australia	2	536	118	....	8	Nil.	Nil.	664
Western Australia..	196	3,443	69	7,298	....	Nil.	33	11,039
Tasmania	12	814	Nil.	351	Nil.	....	3	1,180
New Zealand	4,326	8,385	Nil.	4,291	Nil.	11	....	17,013
Australasia....	7,026	34,002	1,329	20,615	10	225	1,429	64,636
OTHER DUTIABLE GOODS.								
New South Wales ..	....	46,027	375,992	7,318	Nil.	14,560	535	444,432
Victoria	400,201	....	332,374	26,426	19	88,173	101,305	948,498
Queensland	68,970	218,747	....	117,092	Nil.	2,304	16,913	424,026
South Australia	62,336	69,525	49,570	....	22,421	10,785	10,904	225,541
Western Australia..	29,940	363,437	7,666	277,582	....	Nil.	19,292	697,917
Tasmania	39,709	93,952	2,911	3,321	Nil.	....	2,533	142,426
New Zealand	49,473	36,626	128,970	15,967	Nil.	18,125	....	249,161
Australasia....	650,629	828,314	897,483	447,706	22,440	133,947	151,482	3,132,041

Importing Colony.	Colony of Origin.							
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Australasia.
	£	£	£	£	£	£	£	£
				Free Goods.				
New South Wales ..	....	704,036	1,127,840	591,618	14,692	509,133	245,147	3,192,466
Victoria	561,936	....	155,756	62,210	1,817	260,938	43,566	1,086,223
Queensland	174,479	13,721	....	7,099	Nil.	795	681	196,725
South Australia	158,235	19,686	2,817	....	2,915	1,242	1,539	186,434
Western Australia..	23,217	16,615	874	2,462	....	Nil.	37	43,205
Tasmania	7,857	20,850	8	152	Nil.	....	1,079	29,946
New Zealand	136,514	27,340	9,274	5,046	Nil.	10,023	....	188,197
Australasia....	1,062,238	802,248	1,296,569	668,587	19,424	782,131	291,999	4,923,196
				All Goods (dutiable and free).				
New South Wales ..	....	763,058	1,504,845	602,148	14,692	523,886	246,825	3,655,454
Victoria	963,219	....	488,259	91,555	1,838	349,132	145,121	2,039,124
Queensland	244,857	240,297	....	126,735	Nil.	3,099	17,544	632,532
South Australia	220,573	89,747	52,505	....	25,344	12,027	12,443	412,639
Western Australia..	53,353	383,495	8,609	287,342	....	Nil.	19,362	752,161
Tasmania	47,578	115,616	2,919	3,824	Nil.	....	3,615	173,552
New Zealand	190,313	72,351	138,244	25,304	Nil.	28,159	....	454,371
Australasia....	1,719,893	1,664,564	2,195,381	1,136,908	41,874	916,303	444,910	8,119,833

The next table shows the revenue collections on the imports set down above. In the case of only five of the colonies, however—Victoria, Queensland, South Australia, Tasmania, and New Zealand—is the actual revenue collected in 1895 shown; for New South Wales it has been deemed more useful to take the tariff as it will stand on the 1st July, 1897; while in Western Australia a number of articles were placed on the free list on the 1st October, 1895, and the tariff taken for that colony is that which has existed since these alterations came into force :—

Importing Colony.	Colony of Origin.							
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Collected by each Colony.
	£	£	£	£	£	£	£	£
				Intoxicants and Narcotics.				
New South Wales ..	....	13,374	10,127	1,726	Nil.	45	267	25,539
Victoria	2,978	....	1,158	1,512	3	17	99	5,767
Queensland	909	10,438	....	2,143	Nil.	Nil.	Nil.	13,490
South Australia	2	281	1,235	....	9	Nil.	Nil.	1,527
Western Australia..	630	2,260	638	6,731	....	Nil.	17	10,276
Tasmania	79	757	Nil.	401	Nil.	....	1	1,238
New Zealand	21,028	12,139	Nil.	5,517	Nil.	21	....	38,705
Levied on the Produce of each Colony	25,626	39,249	13,158	18,030	12	83	384	96,542

Importing Colony.	Colony of Origin.							
	New South Wales	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Collected by each Colony.
	£	£	£	£	£	£	£	£
				OTHER DUTIABLE GOODS.				
New South Wales ..	....	3,087	111,152	5,855	Nil.	3,061	122	123,277
Victoria	153,212	....	168,282	8,352	7	49,576	39,936	419,365
Queensland	16,181	37,312	....	15,233	Nil.	463	6,759	75,948
South Australia	11,671	17,803	12,729	....	803	2,424	3,356	48,786
Western Australia..	5,134	73,393	1,644	57,378	....	Nil.	3,212	140,761
Tasmania	15,846	19,302	984	1,594	Nil.	....	456	38,182
New Zealand	7,234	8,103	36,011	2,993	Nil.	6,875	....	61,216
Levied on the Produce of each Colony	209,278	159,000	330,802	91,405	810	62,399	53,841	907,535
				ALL DUTIABLE GOODS.				
New South Wales ..	....	16,461	121,279	7,581	Nil.	3,106	389	148,816
Victoria	156,190	....	169,440	9,864	10	49,593	40,035	425,132
Queensland	17,090	47,750	....	17,376	Nil.	463	6,759	89,438
South Australia	11,673	18,084	13,964	....	812	2,424	3,356	50,313
Western Australia..	5,764	75,653	2,282	64,109	....	Nil.	3,229	151,037
Tasmania	15,925	20,059	984	1,995	Nil.	....	457	39,420
New Zealand	28,262	20,242	36,011	8,510	Nil.	6,896	....	99,921
Levied on the Produce of each Colony	234,904	198,249	343,960	109,435	822	62,482	54,225	1,004,077

It will be seen that, on the bases mentioned above, the total duties collected on Australasian produce amount to £1,004,077, of which New South Wales takes £148,816, or 14·82 per cent. of the whole, while on the produce of that colony £234,904, or 23·40 per cent., is collected in the other six colonies. Victoria, Western Australia, and New Zealand receive more in taxation than they pay away; but in the other four colonies the reverse is the case, the balance against New South Wales being £86,088.

FORESTRY AND FISHERIES.

FORESTRY.

FEW countries have such a wealth of timber as New South Wales possesses. Its woods are as varied as they are valuable, ranging from the ironbarks, unsurpassed for work requiring hardness and durability, to the kinds suitable for the most delicate specimens of the cabinet-maker's art. It must be confessed, however, that some varieties of timber trees, at one time very plentiful, and which, had they received attention at the hands of the State, would be plentiful still, are now hard to find in any district to which there is easy access. But this is the common experience of new countries, where the pioneers, whether settlers or timber-getters, cut down indiscriminately, giving no thought to anything but their immediate requirements.

The necessity of preserving the timber resources of the colony, and preventing the ruthless destruction of the best species of brush and hardwood which was being carried on, principally in the Clarence River district and in the eucalyptus forests on the Murray, led the Government, in 1871, to establish a certain number of Forest Reserves throughout the country, in which permission to cut timber should be granted upon payment of a fixed fee. It soon became apparent that stringent regulations alone could put a stop to the reckless operations of the licensed timber-getters; but it was not until September, 1878, that such regulations were issued. These appeared not a day too soon, as the best species of cedar, which abounded in the Clarence River districts, had been exploited to such a wasteful extent that the supply of this magnificent timber threatened to give out. Cutting down indiscriminately trees of all sizes, and clearing the lower lands of their best timber, the cedar-cutters, after disposing of all that could be cheaply transported, or easily floated down the rivers in time of flood, left a considerable surplus of felled timber on the ground to lie and rot. Then they travelled farther north, to carry on the same depredations along the rivers of the neighbouring colony of Queensland. The same system had been pursued in the gum forests of the Murray. Considerable quantities of excellent timber were destroyed in the forest reserves of that part of the colony, to the detriment of the district, which was deprived of its natural wealth, and to the injury of the colony at large, which suffered the loss of much of its best timber without receiving an equivalent in revenue.

In 1875 the office of Forest Ranger was first created, and this led to the formation, in March, 1882, of a Forest Conservation Branch, which was attached to the Department of Mines. During the year 1889 the Forest Conservation Branch was placed under the administration of the Colonial Secretary, but it was afterwards again brought under the control of the Minister for Mines and Agriculture. In the year 1882 the colony was also subdivided into a number of forest districts. These are frequently inspected by forest rangers, whose duty it is to report on the existing state of proclaimed reserves, control the operations of licensed timber-getters, receive royalties on the various kinds of timber upon which such dues may be levied, and report upon applications to ringbark trees on Crown lands, whether comprised in forest reserves or otherwise. In performing many of these duties the forest rangers, it may be mentioned, are assisted by the mounted police force. The reserves under the supervision of the Department are shown in the following table:—

Class.	Number.	Area in Acres.
Reserves in Class A	729	3,234,196
" in Class B	40	102,168
" in Class C	361	2,359,464
" for planting	12	2,265
Total	1,142	5,698,093

As shown in the above table, reserves for the preservation of timber are divided into three classes, according to their importance, and the particular quality and value of the timber which they contain; and, in addition, there are a small number of reserves which are at present only used for the purpose of planting selected species of trees.

Licenses are issued to cut timber on reserves in class A at a fixed fee of £6 per annum, or 10s. per month, without royalty; and on reserves in Class B the fee demanded amounts to £9, or 15s. per month. On reserves in Class C, general permits to cut timber for saw-mills are issued at a rate of £6 per annum, or 10s. per month, to which is added the payment of a royalty of not less than 3d. nor more than 3s. per 100 superficial feet, as may be decided by the Minister; provided that when the trees are suitable for splitting only the royalty may be charged at not less than 1s. 6d. per 100 cubic feet.

Licenses are also issued to cut and remove timber on ordinary Crown lands, except timber reserves, reserves for public recreation, sites for towns and villages, and areas permanently dedicated for any public purpose; also lands within 1½ chains of any navigable river, lands held under conditional or special lease, or measured for sale, or within an enclosure of less than 200 acres, or within half a mile of a head station.

The fee in this case is fixed at £3 per annum, 15s. per quarter, or 5s. for any current month; and the license enables the holder to cut and remove any kind of timber except cedar, beech, blackwood, Moreton Bay pine, silky oak, rosewood, red and black bean, and coachwood, the license fee for cutting which is fixed at £6 per annum.

The prescribed girth, 5 feet from the surface of the ground (except ironbark, which is to be measured 2 feet from the ground), under which measurement no felling of timbers is permitted, is given in the subjoined table for the different species of trees:—

Timber.	Girth. ft.	Girth. in.	Timber.	Girth. ft.	Girth. in.
Red cedar	9	0	Cudgerie or Flindosa	6	0
Blackbutt	7	6	Blood-wood	6	0
Tallow-wood	7	6	Sassafras	5	0
Red gum or flooded gum	7	6	Yellow cedar	4	6
*Ironbark (of various species)	7	6	Black-wood	4	6
Hoop or Moreton Bay pine	7	6	Yellow box	4	6
Red bean	7	6	Stavewood	4	6
Black bean	7	6	Apple-tree	4	6
Onionwood	7	6	Blue fig	4	6
Mountain ash (*Flindersia australis*)	7	6	Bogum Bogum	4	6
Grey or blue gum	7	0	Corkwood (*Ackama Muelleri*)	4	6
Woollybutt	7	0	Blue-berry ash	4	0
Brush or white box	7	0	Pigeon-berry ash	4	0
Turpentine	7	0	Black, red, or white pine	3	0
Spotted gum	7	0	Swamp oak	3	0
Messmate	7	0	Forest oak	3	0
White beech	7	0	Red ash	3	0
Blue beech	7	0	Maiden's blush	3	0
Negro-head beech	7	0	Coachwood	3	0
Rosewood	7	0	Corkwood (*Endiandra Sieberi* and others)	3	0
Peppermint or red-wood	7	0	Native olive	3	0
Swamp mahogany	7	0	Beefwood	3	0
Forest red gum	7	0	Tulip	3	0
Silky oak (*Grevillea robusta*)	6	0	Water gum	3	0
Mahogany (forest and red)	6	0	Hickory	3	0
Mahogany (white)	6	0	Brigalow	3	0
*Stringybark	6	0	Myall	3	0
Box and grey box	6	0	Honeysuckle	3	0
White box	6	0	River oak	3	0
Eurabbie	6	0	Black oak	3	0
Mountain gum	6	0	Silky oak (*Orites excelsa*)	3	0
Grey gum	6	0	Brown pine	3	0

* West of Great Dividing Range, 4½ feet for ironbark and 4 feet for stringybark.

The license fee for stripping wattle-bark is fixed at not less than 10s. nor more than 40s. per month. No tree of less girth than 15 inches of the black or feather-leaf species, nor less than 12 inches of the golden or broad-leaf species of wattle, measured at 2 feet from the ground, is permitted to be stripped; and each tree is required by the regulations to be thoroughly stripped before the person so employed passes on to another. Permits are also issued for cutting piles and mining props, and for thinning out timber, in order to improve the growth of the trees remaining; and for cutting and removing from a reserve a specified number and kind of trees.

Infringements of the timber regulations are punishable by fine, not exceeding £5 for the first offence, £10 for the second, and £20 for the third, irrespective of the value of the timber and material destroyed, for which also the offender may be held responsible. The number of prosecutions for illegally cutting and removing timber in 1895 was 119, and convictions were obtained in 103 cases.

In the reserves subject to royalty, the quantity of timber cut during each of the past four years is shown below. It will be seen that the quantity has fallen off considerably during the last three years:—

1891	11,760,497 feet
1892	15,818,000 ,,
1893	10,506,472 ,,
1894	5,158,759 ,,
1895	4,922,707 ,,

in addition to which a large quantity of sleepers and piles was obtained.

The revenue of the Forest Department from forestry in 1895 was £6,139, made up as follows:—

	£
Forest reserves—	
Permit licenses	162
Timber-cutters' licenses	629
Wattle bark licenses and miscellaneous	435
Royalty	2,452
Crown lands—	
Wood-cutters' licenses	1,951
Cedar licenses	204
Proceeds of sale of seized timber	200
Penalties	106
Total	£6,139

There was also a sum of £395 received from miscellaneous royalty and prickly-pear leases. The cost of administering the Department during the year was £14,522, being £7,988 in excess of the total revenue. The amount received from the forest reserves of the Crown in each year since the regulations were proclaimed on the 24th September, 1878, is shown below:—

	£		£
1879	7,310	1888	19,019
1880	8,328	1889	16,521
1881	10,156	1890	15,437
1882	12,327	1891	18,455
1883	16,301	1892	16,176
1884	17,565	1893	9,547
1885	13,144	1894	6,350
1886	13,934	1895	6,534
1887	13,629		

During the years 1895 and 1896 about 60,000 acres of red gum, 30,000 acres of pine, and 2,000 acres of coastal forests have been improved by thinning-out and destroying the superabundant growths. This work has been carried out with the object of ensuring the maturity of a larger number of trees to the acre, and, in consequence of the additional light and air afforded, of their reaching that stage in about two-thirds of the time that would be taken under natural conditions. The cost of the thinning-out operations averages 5s. 8d. per acre in the red gum areas, 4s. 6d. in the pine areas, and 7s. in the coastal areas; and it is estimated that this outlay will return during the next twenty years two or three hundred marketable trees to the acre where the present unimproved average is but four or five trees.

The Forest Conservation Branch is charged with the direction of a State Forest Nursery, which is situated at Gosford, in the beautiful district of Brisbane Water, where the acclimatisation of valuable foreign timber trees, and the conservation of such of the best indigenous species as might otherwise be likely to disappear, are attended to. The area set apart for the nursery is 65 acres, of which 25 acres are cleared and cultivated. Among the indigenous trees which are raised there may be mentioned tallow-wood, blackbutt, beefwood, silky oak, yellow pine, Richmond River beech, the best varieties of ironbark, and red cedar, the red cedar seedlings on hand at the close of 1895 numbering about 32,000. Of late, special attention has been paid to the cultivation of the white mulberry, in expectation of a demand for this tree in consequence of the increasing interest taken in the cultivation of silk in the colony. It is estimated that there are 28,000 mulberry trees of different varieties, in various stages of growth, in the nursery, besides nearly 100,000 exotic trees of economic value.

In addition to reforesting the Crown reserves with the best classes of timber, the State Forest Nursery distributes specimens among settlers in the sparsely-timbered areas in the Western District of the colony, and supplies them to municipalities, to the trustees of public reserves, and for the improvement of church and school lands and other purposes. Altogether, from 1890 to the end of 1896, over half a million plants were sent out of the nursery, the number for 1896 being 24,769, of which 11,120 were supplied to public bodies and private persons, and 13,649 were placed in reserves and other plantation areas. The number of merchantable plants remaining in the establishment on the 1st January, 1897, was estimated at 104,040, viz., 21,200 in pots, 17,100 seedlings in boxes, and 65,740 plants open-rooted.

The consumption of wattle-bark is very great in this colony, where it is in large demand for tanning purposes. During 1895, 80,770 cwt. of wattle-bark were imported, valued at £19,634, nearly 68,000 cwt. of this supply being obtained from Tasmania. It will thus be readily seen that there is room for a large development of the trade in New South Wales. The Forest Department has taken steps to prevent the indiscriminate stripping of the bark and the destruction of the trees, which should have the effect of stimulating the industry. The license fees for stripping wattle-bark in the various districts of the colony range from 10s. to 15s. per month.

Forestry is as yet only in its initial stages in New South Wales, and in fact in Australasia, and the establishment of a School of Forestry, in which the information necessary for the proper conduct of the work might be imparted, has been strongly advocated. The foundation of such a school would be of great benefit.

EXPORT OF TIMBER.

The depression which has affected the industrial life of Australia, in common with that of most other lands, has had the good effect of showing how desirable it is to diversify the industries of the country. In the past there has been an undoubted lack of enterprise in pushing an export trade, and a disposition has been evinced to rest content with what was being done in this direction with a few products of the pastoral and mining industries. This apathy seems now to have been shaken off, and it is very probable that the near future will see a large increase in the shipments of domestic produce, and a successful attempt made to supply local wants with various descriptions of goods which are now imported. With no article of commerce has the failure to approach consumers in the densely-populated countries of the old world been more marked than with timber. Although New South Wales is rich in hardwoods most suitable for use in the various forms of engineering construction, and an opening for this class of timber has long existed in the United Kingdom and America, until recently but little had been done to open up a trade with those countries. For many years the development of the local timber trade proceeded on the assumption that the forests of the colony afforded a never-failing supply of merchantable woods; this mistaken notion is not now entertained, but there can be little doubt that there is for the present abundance of good timber of every description, and the operations of the Forest Department promise to have the effect of continuing the supply. As already stated, the indigenous trees of the colony are being supplemented by the planting of good foreign species, and the late Director-General of Forests has given it as his opinion that, in the soil and climate to be found in New South Wales, the favourite pines and hardwoods of commerce can be grown to a marketable size in less than half the time required in their natural habitats. It is, therefore, certain that, with the exercise of a reasonable amount of foresight, New South Wales will be able to favourably compete for a portion of the trade of countries less advantageously placed in respect of this important article.

The timber resources of New South Wales are more valuable than those of any of the other colonies, and include at least twelve different species of hardwood trees suitable for export. Notwithstanding this, however, the export trade of the colony is exceeded by that of Western Australia and of New Zealand. This will be seen from the following table, which gives the exports of domestic timber of each of the seven colonies during the past five years. Shooks and staves, doors, sashes, and other shaped articles are included in the figures; and sandalwood is credited to the colony of Western Australia:—

Colony.	Exports of Timber.				
	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£
New South Wales	53,780	59,028	41,565	34,030	45,029
Victoria	20,951	10,637	7,083	5,940	8,214
Queensland	16,671	17,925	5,187	2,720	2,570
South Australia	926	830	97	54	105
Western Australia	126,776	121,289	66,048	98,234	119,009
Tasmania	44,778	39,301	18,090	20,347	32,685
New Zealand...............	189,760	92,866	106,603	122,686	147,511

The explanation of the decline in the yearly values since 1891 is to be found in the stoppage of public and private works, consequent on the disturbed financial conditions prevailing in Australasia, the trade being essentially an intercolonial one. It will be noticed, however, that the trade shows a tendency to revive. Stronger efforts are now being made to capture a portion of the large timber trade of the United Kingdom, and the figures for 1895 show an improvement on those of the previous year. Strange to say, Western Australia leads the way here, its exports to the United Kingdom in 1895 being valued at £53,273. New Zealand comes second in its trade with England, the value of its domestic exports to Great Britain during 1895 being £17,675. The trade of New South Wales is largely with Victoria, and the decline shown in the table above is due to the smaller imports of that colony. New Zealand is also an important customer of New South Wales, taking a large quantity of ironbark girders, for use in public works, direct from the Northern rivers. During the year 1895 however, New South Wales made a noticeable increase in its trade with the United Kingdom, the value of the exports to the mother country being £10,797, as compared with £1,253 in 1894; and the North Coast mills are now kept going at their full capacity in supplying timber for paving purposes and railway-carriage building, in execution of orders received from Great Britain. The foll[illegible] the value of the timber shipped to each country from New South Wales in 1895:—

Country.	Value.	Country.	Value.
	£		£
Victoria	13,929	New Britain	499
United Kingdom	10,797	Western Australia	454
New Zealand	10,167	New Guinea	206
Queensland	4,688	Italy	155
South Australia	1,188	Marshall Islands	147
New Caledonia	953	Other Countries	214
Fiji	879		
South Sea Islands	753	Total £	45,029

The other colonies of Australasia took 67·76 per cent. of the exports, and the islands of Polynesia, 7·80 per cent. The proportion of 23·98 per cent. went to the United Kingdom, as compared with 3·68 per cent. in 1894, the value of the timber sent there being £10,797.

The exports in 1895 were made up of the following:—

Description.	Quantity.	Value.
		£
Dressed timber	30,022 sup. ft.	255
Rough „	9,397,231 „	41,427
Houses	2 No.	255
Sleepers	2,487 „	724
Palings	1,000 „	6
Posts and rails	161 „	16
Doors	64 „	42
Sashes	279 „	110
Shooks and staves	1,153 pkgs.	470
Shingles	24,000 No.	28
Spars	10 „	24
Paving blocks	35,892 „	171
Piles	2,005 „	1,497
Shutters	8 „	4
Total	....	45,029

Notwithstanding the great natural resources of the colony, the imports of timber are very considerable and largely exceed the exports, the value of the import trade in 1895 being £304,826. Of this sum, however, re-exports to the value of £17,498 were made, leaving the imports for local use at £287,328. The bulk of the timber which comes into the colony consists of pines and other soft woods, the native pine being in some respects inferior to Oregon and Kauri, but there are other soft woods equal to any of the timbers imported. The imports during the year consisted of dressed timber valued at £35,986, rough timber estimated at £239,541, and sundries, such as doors, sashes, shooks and staves, laths, shingles, and palings, worth £29,299. The bulk of the dressed timber in 1895 came from Norway, and, to a lesser extent, from the United Kingdom, Victoria, the United States, South Australia, Canada, and Queensland; while of the rough logs 15,019,762 feet came from the United States, 14,190,161 feet from New Zealand, 13,344,005 feet from South Australia, and 4,594,590 feet from Canada. The bulk of the United States exports are from Port Eureka, California; and the Canadian, from Puget Sound. The trade returns show a somewhat large importation from the neighbouring colonies, but these colonies are not the places where the timber was grown. Victoria supplies the Riverina district; and South Australia, Broken Hill, where there was at one time a large demand for timber for mining purposes.

The figures which have been given show how small is the export trade of New South Wales in timber, and how open it is to development. It is in the hardwoods of the country that the chief expansion of trade may be looked for. Australian hardwood trees are remarkable for the great size of the beams which may be obtained from them, as well as for the extreme strength and durability of their wood. From the table given on page 68, it will be seen that the grey ironbark has a resistance to breaking equal to 17,900 lb. per square inch, as compared with a mean of 11,800 for English oak, and 15,500 for teak. None of the other timbers of the colony has so high a resistance to breaking as this description of ironbark; but nearly all the varieties have a greater strength than oak. The absence of branches for the greater portion of the height enables the timber to be obtained to the best advantage; and as full-grown trees of most varieties are rarely less than 100 feet high, with corresponding girth, the quantity of timber obtainable is very large. The characteristics of the principal species are dealt with in the chapter on "Flora," so that it is unnecessary to repeat them here; but it will easily be seen how valuable woods possessing such qualities would be found by persons engaged in building construction.

It has already been shown that the exports of timber from New South Wales in 1895 compared favourably with those in previous years, and few sailing vessels left for England without taking supplies of hardwoods, ranging from 10,000 to 40,000 superficial feet, in pieces suitable for wood-blocking and the construction of railway trucks. This satisfactory advance is in a large measure attributable to the forwarding of samples to and the distribution of pamphlets in England and on the Continent by the Forest Department of New South Wales, and a favourable feature of the shipments referred to is that they were orders and not consignments to test the market. The Government are fully alive to the importance of fostering the trade, and an officer of the Department of Mines has been appointed to inspect shipments of timber, and to brand the pieces with the initials of the name of the colony and of the kind of timber, and grant certificates therefor should he consider the wood to be of satisfactory quality and of the kind it is represented to be. It is hoped that this action will be supported by consignors, and that they will recognise the value of a Government certificate in the sale of their shipments, and so prevent the possibility of the market being unfavourably affected by consignments of inferior quality.

That the United Kingdom offers unlimited scope for the woods of New South Wales may be judged from the fact that it annually imports timber to the value of £17,000,000, or more than the value of the whole domestic exports of the colony. In 1895 its import trade in timber came to £17,135,019, composed as follows:—

	£
Hewn:—	
Fir	2,726,302
Oak	630,799
Teak	574,882
Unenumerated	249,453
Sawn:—	
Fir	10,305,483
Unenumerated	390,433
Staves	594,615
Furniture woods and hardwoods:—	
Mahogany	270,712
Unenumerated	629,502
House frames, fittings, etc.	762,838
Total	£17,135,019

In this trade Australasia, with its valuable resources, shared to the extent of about £140,000, or 0·82 per cent., as compared with £66,000, or 0·36 per cent. of the total, in 1894. The largest participant was Russia, with £3,701,605; Sweden's portion was £3,684,187; Norway's, £1,361,077; Germany's, £1,005,127; France's, £614,546; Canada and the United States had respectively the quota of £3,193,586 and £2,112,856; while Burmah took £422,507 as its part. The hewn fir was pretty fairly distributed over the great countries of Europe; the United States and Canada sent the greater part of the oak; Burmah supplied from its forests nearly three-fourths of the teak; while more than half of the unenumerated hewn timber was furnished by Canada.

The kingdoms of Norway and Sweden, the Russian Empire, the Canadian Dominion, and the United States of America supplied the sawn pine; and the staves were principally the product of Germany, Russia, and the United States. The largest supplies of mahogany came from British Honduras, the Gold Coast, and Mexico, which between them furnished 19,249 out of 34,848 tons of this favourite wood with English furniture-makers. Included in the sum of £629,502 shown as the value of other "furniture woods and hardwoods" imported, is £126,996—the value of 30,385 tons of timber imported from the colonies of Australasia. Western Australia took the largest share with £89,595; then followed Queensland, with £12,243; New South Wales, with £8,877; Victoria, with £6,939; Tasmania, with £6,280; and New Zealand, with £3,062. The house frames, fittings, and joiners' and cabinet work were mostly furnished by the United States and Germany.

It is impossible to say how much of the timber exports of other countries could be displaced in the United Kingdom by Australian hardwoods and fancy timbers, but that the quantity is considerable cannot be doubted. Importers there have taken the best kinds offering for the purposes they had in view, and it is for New South Wales to show that many of its species of trees produce superior woods to those now used for certain classes of work. In the British Isles, whose coasts are so thickly studded with harbours, a vast quantity of timber is used for piers and jetties; and for this class of work, especially for piles, Australian hardwoods are very well fitted as compared with the woods of other countries, having a much longer life. For other constructive outdoor work, both above and below ground, in which strength and durability are desirable, for railway sleepers, and the paving of streets, they are very suitable; while some of the hardwoods, such as the mountain ash, are fitted for the making of furniture. At the Chicago Exhibition the Commissioners for New South Wales Railways showed six sleepers, three of which had been taken out of the Suburban line after being in the road for twenty-four years, and three out of the Western line, near the Lithgow Zig Zag, which had been in the road for twenty-three years; and these sleepers were but little the worse for wear. The Forest Department also exhibited railway sleepers, made of ironbark and red gum, which had stood the test of seventeen to twenty-five years' constant use. A portion of the New South Wales Court was laid with wooden blocks of blue gum, blackbutt, tallowwood, forest mahogany, boxwood, and ironbark, showing the suitability of these hardwoods for paving purposes. The utility of these woods for such purposes has been proved in Sydney, the blocks, after subjected to heavy and continuous traffic for nearly ten years, having exhibited but slight wear. According to figures supplied by the City Surveyor of Sydney, the average wear of mahogany is $\frac{1}{8}$th of an inch per annum; of blue and red gum $\frac{1}{10}$th of an inch; of turpentine $\frac{1}{17}$th; and of blackbutt, $\frac{1}{26}$th of an inch. Professor Warren, in his work on "Australian Timbers," states that he is continually being shown specimens of timber, taken from bridges or piles in damp ground, which have been in use for forty to sixty years or more, and show no signs of decay whatever.

It is estimated by the Forestry Department that the area of ironbark lands belonging to the Crown is 16,870,000 acres, on which there is sufficient timber ready for cutting to yield 167½ million sleepers, and that if private lands are also taken into account the number of ironbark sleepers alone which the colony can produce may be set down at 500 millions, sufficient for no less than a quarter of a million miles of railway track.

The following is a list of the best of the New South Wales hardwoods of which there is an abundant supply, and the purposes for which they are most suited:—

Bastard Mahogany.—This tree grows to a height of 40 to 50 feet, with a diameter of 2 feet. The timber is strong and durable, and is suitable for boat knees and the felloes of wheels.

Blackbutt.—A height of 100 to 200 feet is attained by this tree, and its diameter ranges from 3 to 8 feet. It has even been found measuring 15 feet across, but this width is exceptional. It gives a first-class wood, strong and durable, and suitable for house carpentry, bridge planking, paving blocks, ships' decks, and other purposes of a similar kind.

Blue Gum.—This tree reaches a height of 100 to 120 feet, with a diameter of 3 to 5 feet. The timber is strong and durable, straight in grain, and is easy to work. It is used in building construction and ship-building, and for ships' planks, wheel naves and felloes, paving blocks, etc. An inferior growth of the same tree is known under the name of *Flooded Gum.*

Forest Mahogany.—The height of this tree ranges from 60 to 120 feet, and its diameter from 3 to 5 feet. Its wood is red in colour, and is strong and durable. It is suitable for paving blocks, fencing, beams, rafters, and rough carpentry.

Grey Ironbark.—This tree, which grows to a height of 100 to 150 feet, with a diameter of 2 to 5 feet, gives one of the very best of hardwoods. It is hard, heavy, tough, inlocked, and durable. It is suitable for piles, girders of bridges, railway sleepers, poles and shafts of carriages, and other like purposes.

Mountain Ash.—This tree reaches a height of 100 to 150 feet, with a diameter of 3 to 4 feet. Its wood is tough, durable, and elastic; and it splits easily. The timber is suitable for staves of casks, shingles, poles, shafts of drays, palings, rails, rough buildings, and some classes of furniture.

Narrow-leaved Ironbark.—A height of 100 to 150 feet is attained by this tree, with a diameter of 2 to 3 feet. Its wood is hard, heavy, strong, interlocked, and durable; and is suitable for railway sleepers, girders, spokes of wheels, poles and shafts of carriages, etc.

Grey Box.—This tree grows to mammoth size in the Southern districts of the colony. The timber is strong, durable, and fairly straight-grained. It is used for paving blocks, posts, building purposes, mauls, railway sleepers, etc.

Red Ironbark.—This eucalypt grows to a height of 100 to 150 feet, with a diameter of 3 to 5 feet. Its wood is highly valued for all purposes in which strength and durability are required. Large beams and girders, railway sleepers, and draw-poles, are some of the purposes for which it is extensively used.

She or Pale Ironbark.—This tree attains a height similar to that of the red ironbark, with a diameter of 4 to 5 feet. Its wood is highly appreciated, being hard, tough, strong, inlocked, and durable. It is used in bridge construction, and for railway carriages, poles of drays, spokes of wheels, piles, beams, and other similar purposes.

Spotted Gum.—This eucalypt derives its vernacular name from the spotted appearance of its bark. It grows to a height of 100 to 150 feet, with a diameter of 2 to 4 feet. The timber is strong, close-grained, elastic, and durable; and it splits well. It is suitable for paving blocks, ship and house building, girders, coopers' staves, cart and buggy shafts, etc.

Stringybark.—The *Eucalyptus microrrhyncha*, or stringy-bark, grows to a height of 50 to 100 feet, and a diameter of 24 to 54 inches. It gives a light, hard, strong, and close-grained wood, which polishes well. House carpentry, flooring-boards, and fencing are some of the purposes for which it is most suited.

Tallow-wood.—This tree, which grows to a height of 100 to 150 feet, with a diameter of 6 to 8 feet, gives a strong, durable, and handsome wood, which shrinks less than most Australian hardwoods, and rarely splits or shells. It is largely used for building purposes, especially for flooring; and for boat-building, piles, bridge-decking, and paving-blocks. The flooring of the fine new building of the Equitable Life Assurance Society of the United States, in Sydney, has been laid in parquetry with this wood.

Turpentine.—A height of 150 to 200 feet, with a diameter of 3 to 5 feet, is attained by this tree, the timber of which is much valued for piles, paving-blocks, posts, ship-building, girders, and other constructive purposes, being strong, hard, heavy, and durable, and most difficult to burn.

White Box.—This tree grows from 50 to 60 feet in height, with a diameter of 20 to 40 inches. The timber is hard, tough, and durable, and possesses great lateral strength. It is suitable for naves, felloes, scantlings, jetty, and bridge-piles, planking, fencing, etc.

Woollybutt.—This eucalypt reaches 100 to 150 feet in height, with a diameter of 3 to 5 feet. The timber, which is strong and durable, is suitable for house-building, wheelwrights' work, fencing, felloes, spokes, shafts, etc.

Fair average values in Sydney of the hardwood timbers which have been specified, are as follow :—

Kind of Timber.	Round piles: per running foot.	Girders: per cubic foot.	Scantling: per 100 sup. feet.
	s. d.	s. d.	s. d.
Bastard mahogany	1 4	1 6	9 0
Blackbutt	1 4	1 6	9 0
Blue gum	1 3	1 5	9 0
Forest mahogany	1 4	1 6	9 0
Gray ironbark	1 9	2 0	11 0
Mountain ash..................	1 6	1 9	10 0
Narrow-leaved ironbark ...	1 9	2 0	11 0
Red ironbark..................	1 9	2 0	11 0
She or pale ironbark	1 9	2 0	11 0
Spotted gum	1 3	1 5	8 6
Stringybark	1 3	1 6	8 6
Tallow-wood	1 6	1 10	10 0
Turpentine	1 3	1 6	9 0
White box	1 3	1 5	8 6
Woolly-butt	1 3	1 5	8 6

The cost of putting the timber on board vessels in Sydney is 9d. per 100 superficial feet, in addition to the prices quoted above. The freight from Sydney to London may be stated at 5s. to 6s. per 100 superficial feet for sailing vessels, and 8s. to 10s. for steamers. Wood-blocking timber is always shipped in full cut sizes, but in long lengths, say 15 to 25 feet, in order to prevent cracking and the extra expense of handling; it can, therefore, only be quoted, as in the table above, at per 100 superficial feet. Moreover, the size of the wooden blocks used by the municipalities in England varies.

The softwoods of the colony are found chiefly in the brush forests of the coast district, and rival those of any other part of the world. Some of the least known of the brush forest trees have wood grained and marked most beautifully, which is capable of receiving the highest polish, while others are fragrantly perfumed. These woods are adapted to the finest description of cabinet-meeting, and it is strange that their merits should have so long escaped attention. Amongst the chief varieties of woods of this class may be mentioned the red cedar, now unfortunately disappearing, the beautiful wood of which, somewhat resembling mahogany, is admirably adapted for the finer kinds of cabinet-makers' work. Some of the cedar trees grow to immense size, as much as 2,500 cubic feet of valuable timber having been obtained from one tree. In addition to the cedar may be mentioned rosewood, tulipwood, yellow-wood, white maple, white beech, myall, marblewood, mock orange, red and black bean, and many others. Besides their use for cabinet-making, many of the brush timbers are of great utility for the rougher kinds of carpentry, while some, both hard and soft woods, are admirably adapted for coach-builders' and coopers' work. The chief description of pine growing in New South Wales is the Moreton Bay white pine, found in the coast districts, as far south as the Bellinger. It is soft, light, and easily wrought, and suitable for all the interior woodwork of houses, as well as for cabinet-making. The red or black pine is extensively distributed over the Liverpool Plains, and in the Lachlan and Darling River districts, as well as around Berrima. It is beautifully marked in the grain, takes a fine polish, and has an agreeable fragrance. There are numerous other varieties of pine, but these resemble in their main features the trees already described. Colonial deal is an excellent timber, and is obtained in very large scantling, the tree frequently reaching 120 feet in height. It is soft, close-grained, easily wrought, and remarkably free from knots. Its use, therefore, is extensive for cabinet-makers' work and house fittings.

The beauty of colour and grain of many of these fancy timbers would, doubtless, cause them to be highly prized by furniture makers, if they were brought under their notice. Even if they could not be placed in London at the rates paid for the woods which are popular with cabinet-makers there at present, that would only be a slight drawback, as a large proportion of the British public are willing to pay a higher price for an article if they can thereby obtain something uncommonly beautiful. A description of some of the best of the soft and fancy woods of the colony, with their market values, etc., is given below in the same manner as the hardwoods have already been dealt with :—

Beech.—This tree, which attains a height of 100 to 150 feet, with a diameter of 3 to 5 feet, is one of the most useful of New South Wales trees, giving a strong, white, close-grained, and durable wood, which is easily worked, and is greatly valued for decks of vessels, flooring, turnery, and furniture-making. It is very suitable for bedroom suites.

Blackbean.—This tree grows to a height of 120 to 130 feet, with a diameter of 4 to 5 feet. The wood is handsome, dark-coloured, close-grained, and durable. It greatly resembles walnut, and is equally suitable for cabinet-making. Very handsome gun-stocks have been made of this timber.

Black Oak.—This timber, which grows from 40 to 50 feet in length, with a diameter of 18 to 24 inches, is also suitable for cabinet-making. It is used in the colony for bullock yokes, mauls, tool handles, and shingles.

Blackwood reaches a height of 50 to 80 feet in New South Wales, with a diameter of 18 to 24 inches. Like blackbean, the timber greatly resembles walnut, and is one of the colony's most serviceable furniture woods. It is highly valued for all kinds of cabinet-work, billiard-tables, and carriage building.

Coachwood is a light, soft, fragrant, close-grained, and tough wood. It is suitable for coach and boat building, and for cabinet-work. It grows to a height of 50 to 70 feet, with a diameter of 12 to 24 inches.

Colonial Pine reaches a height of 150 to 200 feet, with a diameter of 2 to 4 feet. The wood is pale in colour, and is strong and durable if kept continually dry or wet, but it soon decays if exposed alternately to dryness and dampness. It gives spars 80 to 100 feet long.

Common or White Pine varies in colour from light to dark brown. It is a very durable, knotty wood, takes a good polish, and has an odour of camphor. It is used for building purposes. The timber attains a height of 60 to 70 feet, with a diameter of 18 to 24 inches.

Forest Oak is another valuable wood for cabinet-making. It is a handsome timber, rather heavy. The tree grows to a height of 80 feet, with a diameter of 2 feet.

Rosewood is one of the largest and best of the trees of the colony. It is a strong, close-grained, and durable timber, red in colour, and rose-scented, and is of the greatest value for all kinds of cabinet-work. It would make an excellent substitute for mahogany, which is so largely used by English cabinet-makers. The tree reaches a height of 100 feet, and its diameter is 4 to 6 feet.

Myall.—This tree grows to a height of 30 to 40 feet, with a diameter of 18 to 20 inches. It is a hard, durable wood, and is greatly esteemed for the manufacture of glove and handkerchief boxes, etc., having a perfume of violets when unpolished.

Tulip-wood, which grows to a height of 50 to 60 feet, is a close-grained, hard, and firm timber. Its appearance is uncommon and attractive, being marked with irregular, longitudinal streaks of black and yellow, and it takes a fine polish. It would make handsome suites of furniture.

Silky Oak.—The *Grevillea robusta*, which attains a height of 70 to 80 feet, is one of the most suitable woods of the colony for boudoir and bedroom suites. Its colour is a light grey, beautifully crossed with silvery waves. It possesses a delicate lustre when polished.

Red Cedar.—This is a beautiful wood, much valued for the manufacture of furniture and for fittings of houses and ships. It is of a dark red colour, and, although light and easily wrought, is very durable. The tree commonly grows to a height of 100 feet, with a diameter of 6 feet; but it has been found 200 feet high, and of a diameter of 10 feet.

Yellow Cedar grows to a height of 50 to 60 feet, and a diameter of 2 to 3 feet. It is close-grained and durable, and polishes well. The timber is suitable for cabinet, carving, turning, and fancy work.

Yellow-wood.—The *Daphnandra micrantha* attains a height of 100 to 120 feet, with a diameter of 3 feet. The wood is yellow in colour, and fragrant; it is close-grained, easily wrought, and polishes well, and is very suitable for cabinet-making.

Satinwood is another timber yellow in colour. It is soft and silky to the touch, close-grained, and easily wrought. This wood is also suitable for cabinet-making, and is considered to be superior to the satinwood used in the English furniture trade.

Lignum Vitæ.—This is another white beech. It is smaller in its proportions than the beech already described, and grows to a height of 70 to 80 feet, with a diameter of 2 feet. It is used for similar purposes.

The following table shows the values in Sydney of the softwoods enumerated above, cut in planks or flitches:—

Kind of Timber.	Per 100 sup. ft.	Kind of Timber.	Per 100 sup. ft.
	s. d.		s. d.
Blackbean	22 6	Myall	35 0
Black oak	25 0	Tulip-wood	40 0
Blackwood	30 0	Silky Oak	25 0
Coachwood	22 6	Red cedar	30 0
Colonial pine	12 0	Yellow cedar	30 0
White pine	14 0	Yellow-wood	25 0
Forest oak	27 6	Satinwood	30 0
Rosewood	15s. to 21s.	Lignum vitæ	24 0

EUCALYPTUS OIL.

A volatile oil, which is extensively used for medicinal purposes and in manufactures, is distilled from the leaves of the eucalyptus trees of Australia and Tasmania. The quantity of oil obtained varies according to the species and the district in which it is found; but the percentage yielded by a few of the best known kinds may be set down as under:—

Eucalyptus amygdalina	3·313	per cent.
,, *oleosa*	1·250	,,
,, *leucoxylon*	1·060	,,
,, *goniocalyx*	0·914	,,
,, *globulus*	0·719	,,

The *E. amygdalina* and the *E. globulus* give the principal oils of commerce. The latter species takes kindly to foreign soil and climate, and its cultivation has rendered habitable parts of countries which otherwise would have been hot-beds of fever. Algeria and California are formidable competitors with Australia and Tasmania for the supply of the requirements of the world in the matter of eucalyptus oil. The exports of this article from New South Wales are small, and in 1895 consisted of the following:—

Country.	Packages.	Value.
	No.	£
United Kingdom	13	104
Germany	23	94
Total	36	198

FISHERIES.

The seas that wash the shores of New South Wales abound with fish, but none of the other resources of the colony have been so much neglected as the fishing industry. Splendid fishing-grounds extend along the whole length of the coast, which presents many natural features peculiarly favourable to the existence of a very large supply of the best food fishes. In the quiet waters of its numerous bays and estuaries, and in the vast lakes and lagoons communicating with the sea, are found shelter and sustenance, as well as excellent breeding-grounds. The principal fishes found on the coast are not migratory, and as a consequence may nearly always be procured in the market. It is unnecessary to dwell here on the value of the many food fishes to be found in the waters of the colony, as that has already been dealt with in the chapter on "Fauna"; but it may be repeated that the late Rev. J. E. Tenison-Woods placed the number of edible species at 105. With an unlimited supply, however, the fishing industry has long been in an unsatisfactory condition, and fish is, with few exceptions, scarce and dear.

That there is no lack of a market for good fish in the colony may be gathered from the fact that fresh, frozen, and preserved fish are imported annually for local consumption to the value of nearly £55,000 sterling. The imports are not now so great as they were a few years ago, having diminished since 1889, when the quantity imported for home consumption was valued at £130,757. This decline, however, cannot be attributed to any great increase in the supply of the local product, with a corresponding fall in the price demanded, for the transactions of the Eastern Fish Market—which furnish the only guide to the fish supply of Sydney—showed a steady contraction until 1895, when the number of baskets sold largely increased. It is impossible to say what is the extent of the fish supply of the metropolis, as there is no record of the fish forwarded to Sydney from several of the fishing-grounds, and many of the fishermen do not send their hauls into the markets; but the returns for the City Corporation's market at Woolloomooloo show that the following quantities of the principal species were received there during the last four years :—

Kind.		1892.	1893.	1894.	1895.
Schnapper	dozen	1,927	2,585	4,566	5,650
Teraglin	,,	1,507	1,896	3,281	4,013
Nannegai	,,	703	491	953	569
Whiting	,,	12,681	5,031	8,671	11,393
Flathead	,,	3,010	2,931	9,021	*
Jewfish	,,	5,036	6,895	17,894	17,675
Kingfish	,,	1,162	409	1,095	1,193
Rock Cod	,,	629	310	233	34
Soles and Flounders	,,	1,592	1,244	1,808	1,184
Mullet	,,	23,145	8,761	19,155	39,839
Crawfish	,,	3,766	5,131	5,241	4,620
Garfish	baskets	3,329	2,082	3,155	3,683
Prawns	,,	3,246	3,950	5,788	5,365

* Not stated.

Fresh fish does not seem to be much more plentiful now than it was in former years, and it is little cheaper, its retail price usually placing it beyond the reach of the greater number of the people. Imported fish has fallen in price ; but the reduction in the value of the imports has not been caused principally by this fact, but by the smaller quantity brought into the colony. The following table shows the imports of fish for home consumption during the past seven years :—

Year.	Fresh and Frozen.	Preserved.	Total.
	£	£	£
1889	1,331	113,260	114,591
1890	2,830	99,101	101,931
1891	3,662	70,927	74,589
1892	4,065	69,951	74,016
1893	4,919	63,953	68,872
1894	3,016	42,727	45,743
1895	2,375	52,098	54,473

Although fresh fish is scarce, and there is a large import of the preserved article, a small quantity of fish drawn from the waters of the colony is annually exported, the amount sent away in 1895 being as follows :—

	£
Fresh	11,473
Preserved	9
Total	[illegible]

The control of the fisheries of the colony is placed in the hands of a body of five unpaid Commissioners, who are appointed for a term of five years, and who, through their salaried inspectors and assistant inspectors, and other officers, supervise the fishing industry of the colony, and see that the regulations which they have issued in regard to the dimensions of nets, the closing of tidal waters to net-fishing, and other matters, are observed. The marine fisheries embrace three divisions—the Northern, extending from the Tweed River southerly to Port Stephens; the Home division, from Port Stephens to St. George's Basin; and the Southern division, from St. George's Basin to Cape Howe. Each of these divisions comprises many important grounds. The inland fisheries are not very important, including chiefly the rivers Murray, Murrumbidgee, Lachlan, and Darling; and Lake George. Every fisherman must apply for a license yearly, the fee being 10s., which is reduced to half the amount if the license is issued in the second half of the year. A license must also be taken out for every fishing-boat, the fee being £1, which likewise is reduced by one-half if granted after the 30th June. Penalties are imposed by the Fisheries Acts for breaches of the regulations of the Commissioners.

The number of fishing-boat licenses issued during the year 1895 was 415, and the number of licenses granted to fishermen was 882, giving an average of 2·1 men to each boat. This shows very plainly what class of boat is used for fishing purposes in New South Wales, and assists in affording an explanation of the fact that with the overfishing of some of the home stations the men have not gone farther away from Sydney. Obviously, very little improvement is likely to result to the industry if the present fishermen are left unaided with their primitive appliances, and others of a better class, provided with capital, are not induced to take up the industry.

The fees derived from the issue of the 1,297 licenses mentioned amounted to £777. What the actual returns of the fishermen were it is impossible to say, but the fish which were sold in the Eastern Market in Woolloomooloo realised £26,950, from which may be deducted 10 per cent. for the Corporation's and agents' charges. The great bulk of the fish came from the stations in the Home division, the largest number of baskets being obtained from Lake Macquarie, followed by Sydney Harbour, the Tuggerah Lakes, Wollongong, and Botany.

For the purpose of oyster culture, the Crown grants leases of the foreshores of tidal waters, which may be defined as between the mean high and mean low water mark. The rental is 20s. per annum for every 100 linear yards. The maximum length for which a lease may be obtained is 2,000 yards; but as the same person may take out more than one lease, the portion of shore which may be acquired is practically unrestricted by the Oyster Fisheries Act. The lease may be taken for a term of twelve months, with right of renewal from year to year; or for a longer period, not exceeding fifteen years, renewable from time to time on the application of the lessee during the twelfth year of the term.

Leases of deepwater or natural oyster beds are also granted for an area not exceeding 25 acres, at a rental which must not be less than £2 per acre. During the year 1895, thirteen applications for leases of areas of from 100 to 1,000 yards, representing a total area of 6,500 yards, were made, and the deposits paid with the applications amounted to £70. The rentals received from leased areas came to £1,488 during the year.

Owing to bad management, the oyster-beds of Port Jackson, Port Stephens, the Hawkesbury, and the Shoalhaven were greatly injured, so that the markets of Sydney have to depend upon the beds of the Clarence, the Richmond, and other northern rivers, as well as places beyond the colony, for their supply of oysters. The appointment of the Fisheries Commission in 1880 probably prevented the entire extinction of the oyster industry in New South Wales, though the operations of the Commission have been much impeded through lack of sufficient legislation to enable them to check the improvidence of the lessees, who, with few exceptions, strip the oyster-beds without regard to future supply. There is but little doubt that the establishment of "parcs" like those which may be seen along the coasts of France and Belgium, where oyster culture is conducted on scientific principles, would be remunerative, as the demand for this delicacy is great, and continually increasing.

During the year 1895, 9,413 bags of oysters were obtained from the tidal waters of the colony, the localities from which they were procured being as under :—

Locality.	Bags.	Locality.	Bags.
Manning River	1,948	Hastings River	239
Wallis Lake	1,630	Evans River	166
Camden Haven	969	Bellinger River	166
Hawkesbury River	864	Clarence River	26
Clyde River	803	Other places	1,761
Port Stephens	587		——
Richmond River	254	Total	9,413

In addition to the above supply, 7,345 bags of oysters were imported from other colonies, their value being set down at £6,286. Of this quantity, 2,124 bags came from Queensland, and 4,981 from New Zealand. A bag of oysters contains 3 bushels, and at the beginning of 1897 the price per bag of good oysters in Sydney ranged from 25s. to 30s.

The number of persons convicted in 1895 under the Fisheries and Oyster Fisheries Acts was sixty-six; the penalties imposed by the magistrates amounted to £147, and eleven nets were confiscated.

Below will be found a classification of the offences of which these persons were proved to have been guilty, with the total amount of fines imposed for each class :—

Offences.	Persons.	Fines.		
	No.	£	s.	d.
Having unlawful nets	19	31	0	0
Fishing in closed waters	21	44	0	0
Fishing without license............................	12	6	0	0
Having undersized fish	1	0	10	0
Using dynamite	2	20	0	0
Removing oysters from Reserve	7	36	0	0
Refusing to give name	1	2	0	0
Other offences	3	2	5	0
Under Inland Fisheries Act	......	5	5	0
Total..................................	66	147	0	0

The unsatisfactory condition of the fishing industry of the colony has on several occasions occupied the serious attention of Parliament and of the Government of the day. The latest effort to place it on a basis on which it may be built up to the large proportions to which it ought properly to attain was the appointment of a Royal Commission in 1894 for the purpose of reporting on the best means to carry out the object in view. This body heard a great deal of evidence on the state of the industry, and visited several of the other colonies in order to see personally what had been and was being done in regard to the fisheries. As a result, they recommended in their report, which was presented to Parliament in June, 1895—that further legislation should be passed for the purpose of regulating the industry; a systematic exploration of the coast made in a properly equipped trawling vessel, to determine the capabilities of the deep-sea fisheries; live fish transmitted to market by means of well-boats; refrigerating cars adopted for transmission of fish by rail; a central fish market erected near Darling Harbour Railway Terminus, with urban and suburban auxiliary markets; the middleman abolished, and authority given to fishermen to vend their own fish; fish-carts substituted for the present system of hawking with basket and barrow; and other proposals of an important character carried out. Towards the close of 1896 a Government Bill for the better regulation of the fisheries and the fishing industry was prepared and presented to Parliament, but lack of time prevented the House from dealing with it.

THE WHALE FISHERIES.

At a time when efforts are being made to revive the whale fishery, it is interesting to trace the history of what was in the early days regarded by many as likely to become the staple industry of the colony. In the year 1791, three ships are recorded as having sailed from Sydney harbour for "the fishery." These were all convict transports, one of which, the Britannia, a vessel belonging to the whaling firm of Samuel Enderby and Sons, is said to have been the first ship to pursue the fishery on the Australian coast. In 1793, Enderby joined the British Government in the expense of fitting out a ship to undertake a voyage to the South Seas, with a view to extend the whale fishery there; and in the following year the ships of this enterprising speculator were actively engaged in whaling off the coast of New Zealand. It was the custom of ships, such, for instance, as those owned by Campbell, one of the earliest of Australia's merchants, to import teas and sugars from Bengal, and British manufactures from England, such as cotton and woollen goods, hats, and other articles, and to obtain a return cargo of oil and skins; although the oil export was relinquished subsequently on account of the duty imposed on its importation into England. The whale fishery was particularly flourishing during the first years of the colony's settlement, and it afforded employment to a considerable number of persons. In 1802, ships were again despatched to pursue the whaling industry off the coast of New Zealand; but according to the evidence of Mr. Campbell, given in 1812, the oil-fishery in Australian waters was then entirely stopped, as the duty and the heavy freights prevented its importation into England, and colonial vessels were not allowed to navigate beyond the limits of the territory. The sealing industry was, however, continuously pursued. In 1823, the firm of Enderby and Sons fitted out a ship to prosecute the fishery off the Seychelle Islands, and the southern branch of the industry experienced a decided revival.

Up to this time no sperm oil had arrived in England save that imported in the ships engaged in the actual fishery of the animal, but in 1823 entries were made in the English Custom-house of sperm oil imported from the colonies, chiefly from Sydney, although the whole quantity so introduced was only 6,083 tuns, the colonial oil being partly the produce of vessels fitted out for the trade from Sydney and Van Diemen's Land. In all probability this oil was that obtained from the black, or right whale, the breeding-grounds of which animal were to be found in Cook's Straits, where what in whaling parlance were termed "shore parties" established themselves for the purpose of killing the whale, the produce of which was sent on to Sydney. The value of the trade in whale oil may be appreciated from the fact that during the year 1827 the total quantity imported into England was 5,552 tuns; and in 1828 the total produce of the New South Wales fisheries alone was 298 tuns of sperm oil, 50 tuns of black oil, 118 tuns of the oil of the sea-elephant, and 7,647 sealskins. The English import fluctuated considerably, but reached its maximum in 1831, when it was recorded as 7,605 tuns.

In 1829 a certain William Sutton went to Portland Bay, and established himself at Whaler's Point, where, during the next few years, he founded a whaling-station, and engaged also in sealing. Here, too, the Hentys came; while the industry had been carried on in Tasmania since 1816, Frederick Henry Bay being the first fishing-ground in that island. In 1830, no less than seventeen ships belonging to Port Jackson were engaged in whaling, a number which had grown to 35 in 1833, and in 1834 to 40, the largest of which was of 365 tons, and the smallest of 80 tons burthen. In the first years of the colony's history the sperm and black oil fisheries, particularly the former, presented a fair field for the investment of capital on a large scale; but by this time the sums embarked in the industry were so considerable that further enterprise had little encouragement. Moreover, the immediate returns were of so precarious a character, and the risks and losses so serious, that a speedy and steady return for capital invested could not be expected, and speculators preferred to put their money into squatting pursuits. The value of the whale fishery to Australia in 1834 may be seen from the fact that while the vessels sailing from Sydney numbered 40, the total number engaged from English ports in whaling in all parts of the world was 90, of from 300 to 400 tons burthen. In 1839, no less than 1,229 tuns of black oil, valued at £41,341, were exported, principally to Great Britain; and 1,279 tuns of sperm oil, valued at £111,280. In 1840, the importation of sperm oil into Great Britain was 5,722 tuns, of which quantity 1,719 tuns were from Australia, exceeding slightly the importation from America, which was 1,717 tuns, but the latter had to pay the high duty on foreign "take" of £24 10s. per tun. The reduction of the duty on the importation into the United Kingdom of foreign whale oil is said, however, to have destroyed the southern whale fishery as far as England itself was concerned; the number of ships fitted out in British ports being in 1841, nineteen; in 1842, eleven; and in 1843, only two, while seven whalers were laid up in port, six were sold out of the trade, and eight were offered for sale. Ships continued to be sent forth from Australian ports, however, and about this time Mr. Benjamin Boyd, whose career in New South Wales was so interesting, and whose death was so tragic, established a whaling-station at Twofold Bay, at a depôt named, after himself, Boyd Town, whence, for some years, vessels were despatched to the southern whaling-grounds, and the pursuit actively prosecuted.

The colonists of Western Australia had also engaged in the whale fishery, but they appear to have been so successfully competed against by the superiorly-equipped Americans, who established a permanent station at Port Leschenault, that they relinquished the industry. The practice of Australian whalers of killing the calves, in order to secure the capture of the mothers, did great damage to the fishery by wastefully thinning out the product, and in 1843 the animal was remarked as becoming somewhat shy and scarce in southern seas. By the year 1847, when the industry had died out entirely in Tasmania, it was noted that it was likewise declining in southern waters generally, and that Australian shipping was engaging more exclusively in colonial trade, although many craft were still at work in whaling on different parts of the coast; and the "take" for years afterwards comprised an export of much value. In 1850 this amounted to 576 tuns of sperm and 16 tuns of black oil, and nearly 14 tons of whalebone, together of a total value of about £29,000; while during the following year the export was 588½ tuns of sperm and 13 tuns of black oil, and nearly 67 tons of whalebone, together of a value of close upon £26,000. The value of the total quantity of whale oil exported from New South Wales has been estimated at about £3,000,000, and from Tasmania at about £1,200,000.

Early in the fifties the whaling industry gravitated to New Zealand, which was found to be central to the fisheries in the South Seas, and a convenient position for the establishment of "shore" parties. Indeed, to this day it is usual for old whalers to animadvert on the New Zealand method of securing the cretacean as having, more than anything else, conduced to the extinction of the animal. The New Zealand fishery was initiated by Captain Eames, from Auckland Harbour, early in the year 1852; but the decline in the industry was henceforward very rapid. In 1850 there were upwards of four hundred whaling vessels in the Southern Ocean alone; while in 1872 there were but seventy-two ships in the middle ground. In fact, the fishery totally died out; but of late years it has again attracted attention, and a small number of vessels prosecute the industry during the season.

MINES AND MINERALS.

THE progress of the Colony during the first sixty years of its history, viewed in the light of later events, seems painfully slow and somewhat uncertain. Yet the earlier colonists must have been conscious of the vast heritage destined to become the fortune of Australia, for on no other supposition can their sacrifices and exertions be understood. To the nations of the Old World this was practically an unknown land, and it was not till the story of the gold discoveries was noised abroad that the importance and possible future of Australia were in any way realised.

Gold-mining was for but a brief period the leading industry of these colonies, even in the wonderful years that succeeded the memorable discovery of Hargraves. Now, amongst the minerals obtained in New South Wales, it yields in importance to silver, and in some years to coal; whilst compared with that of pastoral and agricultural produce the value of gold procured is inconsiderable. The discovery of gold, nevertheless, made Australia a nation, for the current of immigration which set southward on the presence of the precious metal becoming known has never ceased. Thousands of men in the prime of life, who had been attracted to these shores by the hope of fortune easily acquired on the fields of the Turon and Bendigo, seeing patient industry everywhere rewarded, remained to share the general prosperity, and those who came to dig for gold readily turned their attention to their former, but less exciting, pursuits.

Although the settlement of New South Wales has not been affected by the discovery of gold to the same extent as that of Victoria, yet the number of persons engaged in actual search for the precious metal was at one time considerable. This number, however, has gradually decreased as the fields have been despoiled of the treasures contained in their easily worked alluvial deposits. The abandonment of a gold-field is not, of course, always a loss to the country. After the excitement has died out, the digger makes room for the agriculturist, and resources of a more permanent character are developed in parts of the colony which but for the prospector would have been unknown, and but for the farmer would have remained a wilderness. Gold-mining now requires the expenditure of capital for the erection of plant and gold-saving machinery; and the miner whose stock-in-trade of gold-digging appliances consisted solely of a pick, a shovel, and a tin dish, has had, in the great majority of instances, to seek other fields of labour. Still, the mining industry of the colony is in a flourishing condition, and maintains in employment a fair proportion of the people. Many of the gold-miners have turned their attention to the silver, copper, and tin mines, and the coal and shale mines also find occupation for large numbers.

Mining on Crown Lands.

A miner's right is issued for a period of one year or of six months from any date, the fee payable being 5s. and 2s. 6d. respectively. It secures to the holder the privilege of entering upon Crown lands and mining for gold or any other mineral; of occupying a residence area of a quarter of an acre; of diverting and using water for mining and domestic purposes; and of using, for mining or building purposes, timber, bark, stone, and gravel if these are not on exempted or reserved lands, or within the operation of a prohibitory proclamation. In searching for gold the holder of a miner's right may mark off on alluvial ground a prospecting protection area ranging from 600 feet long by 1,200 feet wide to 1,400 feet long by 2,800 feet wide, according to the distance from the nearest protection area or mining tenement producing gold; and when payable gold is struck he is entitled to take up, as a reward for his discovery, a prospecting claim half the length and a quarter of the width of the protection area. Other forms of occupation of alluvial ground under miner's right are block claims, frontage areas and claims, extended alluvial claims, and river and creek claims, all of which are governed by special regulations. In quartz country the prospecting protection area cannot exceed a width of 400 feet; but the length ranges from 480 to 960 feet according to the distance from the nearest mining tenement producing gold. The claim which may be marked off when payable gold is discovered is half the length and the full width of the protection area. Ordinary and extended quartz claims may also be taken up under miner's right; and special regulations govern water-rights, residence areas, and machinery areas, the last-mentioned representing 2 acres of land to which a person erecting quartz-crushing or other machinery for extracting gold becomes entitled. Special leases of increased areas may also be granted for gold-mining purposes where unusual difficulties exist in working the ground; but in any such case the maximum area cannot exceed 100 acres. The number of miners' rights issued during 1896 was 27,278, and the revenue derived therefrom amounted to £10,507.

It is only the holder of a miner's right who may take out a gold-mining lease. The area for which an ordinary lease is granted ranges from 1 to 25 acres, or less than 1 acre by conversion of a mining tenement; and the term for which it may be taken out ranges from one to fifteen years. The annual rent payable is fixed at £1 per acre or portion thereof; and when application is made for the lease, the first year's rent must be paid, together with a survey fee ranging in amount from £1 for 1 acre to £3 10s. for 20 to 25 acres. One man must be employed for every 2 acres of ground taken up. No assignment, mortgage, sub-lease, or encumbrance can be made in connection with a gold-mining lease unless with the sanction of the Secretary for Mines. The holder of a miner's right or of a lease under the Act of 1874 may apply for a permit to mine for gold or for any other mineral under roads, streets, navigable waters, or commons or reserves. The rent payable under an authority to mine for gold is 10s. per acre per annum; but in the case of small areas, the holding of miners' rights may be imposed as a condition instead of the payment of rent. A permit to search for gold on a residential lease on a gold-field may be granted to the lessee thereof, or to any person other than the lessee, provided he be the holder of a miner's right. Business licenses, operating upon gold-fields, are granted at the rate of 20s. per annum, or 10s. for six months from date of issue. They entitle the holder to the occupation, for the purpose of residence or of carrying on business, of one-quarter of an acre in township sites, or of 1 acre on other Crown lands. Within twenty-eight clear days after the issue of the certificate of conditional registration, improvements in buildings must be made to the value of £10, otherwise the area taken up is deemed to be abandoned. During the year 1896 there were issued 2,285 business licenses, the fees therefrom amounting to £1,403.

Before the close of the year 1896, when an Amending Act was passed, a miner's right could not be used in connection with the search for and the winning of minerals other than gold, the equivalent authority being termed a mineral license. Now, a miner's right confers on the holder all the rights and benefits secured by a mineral license, and the fee payable for the latter, which was formerly 20s. for one year, has been reduced to 5s. for twelve months and 2s. 6d. for six months, as in the case of a miner's right. For the purpose of searching for opal, the holder of a miner's right or a mineral license is permitted to take possession of and to occupy 400 by 400 feet of Crown lands, and for other minerals an area of 40 acres; but the area which may be occupied for the purpose of mining for and winning minerals is much less, being 100 feet by 100 feet in the case of opal, and 4 acres in the case of other minerals. A mineral prospecting area is the term applied to land occupied in searching for minerals, and a mineral claim that applied to land occupied in mining for and winning minerals. For the purpose of searching for coal, the holders of sixteen miners' rights or mineral licenses may conjointly take possession of not more than 640 acres as one mineral prospecting area; and for any other mineral than coal, gold, or opal, the holders of two rights or licenses may take possession of not more than 80 acres. The extent of land which may be taken possession of conjointly as a mineral claim is not more than 12 acres, by the holders of three miners' rights or mineral licenses, in the case of minerals other than coal, gold, or opal; and not more than

200 feet by 200 feet, by the holders of four miners' rights or mineral licenses, in the case of opal. Within twenty-eight days of the discovery of opal, the occupier of a prospecting area must mark off and occupy a mineral claim 200 feet by 200 feet, which must be worked by not less than two men. In the case of other minerals, application must be made within thirty days of discovery for the conversion of the prospecting area into a mineral leasehold. A holder of a mineral license is allowed to occupy, for the purpose of residence, a piece of land not exceeding in extent a quarter of an acre, and is entitled to the use of water under *certain* conditions. In the course of the year 1896, 1,298 mineral licenses were issued, the revenue derivable therefrom being £879.

A mineral lease is granted for the purpose of mining for any other mineral than gold, and it is not necessary that the applicant for such should be the holder of a miner's right or a mineral license. In the case of coal the minimum area which may be leased, unless with the special consent of the Secretary for Mines, is 40 acres, and the maximum 640 acres; for other minerals the area may not be more than 80 acres, nor less than 20 acres, except, as in the case of coal, with the sanction of the Minister; but there is nothing to prevent a person holding more than one lease. The term for which a lease may be granted ranges from one to twenty years, and the annual rent, which is payable in advance, is at the rate of 5s. per acre. Coal-mining leases carry a royalty of 6d. per ton upon all coal raised, the rent being payable until the amount is exceeded by the royalty, when the latter only becomes payable. Reserved lands may be leased subject to the same conditions as Crown lands, unless the mineral sought is coal, in which case the annual rental is fixed at 2s. per acre if the surface of the land or any part of it is required, 1s. 6d. per acre where no surface is required, and 1s. per acre if wholly under water. The royalty payable, however, is the same as that charged in leases of Crown lands. The labour conditions of the leases mentioned are proposed by the applicant, and are subject to approval by the Secretary for Mines. All dealings in connection with these leases are the same as in gold-mining leases. The holder of a miner's right, or of a lease under the Act of 1874, may be granted an authority to mine for minerals under roads, streets, navigable waters, or commons or reserves. For coal the rent is 2s. per acre per annum, with a royalty of 6d. per ton of large coal and 3d. per ton of small coal. If the royalty exceeds the rent, then the former only is payable. In the case of other minerals except gold, the royalty payable is at the rate of 5 per cent. on the value, with a rent similar to that charged for coal lands. In the case of small areas the holding of a mineral license may be imposed as a condition in lieu of payment of rent.

At the close of the year 1896, the area held under lease to mine for gold was 12,287 acres, and for other minerals 61,748 acres, making a total of 74,035 acres of Crown lands held under mining lease. Under application to lease, the area of auriferous Crown lands held was

6,547 acres, and of lands upon which other minerals were being sought, 9,450 acres, giving a total of 15,997 acres of Crown lands held under application to lease.

MINING ON PRIVATE LANDS.

Certain of the Crown lands of the colony have been alienated from time to time, subject to various reservations with respect to gold and other minerals which might afterwards be found therein. Other lands, again, have been alienated without any such reservation; but as it is the established law of England that the right to the royal metal gold does not pass from the Crown unless by express conveyance, on all alienated lands has the precious metal remained the property of the State. Under the Crown Lands Act of 1884 owners of lands alienated under that Act, or under any Act thereby repealed, and in respect to which the right to minerals was reserved by the Crown, were granted permits to remove such minerals, subject to the payment of royalty; and under the Mining Act of 1889 authorities might be issued to any person to dig and search for gold and other minerals on all lands which, after the commencement of the Act, might be sold conditionally, by auction, in virtue of improvements, or otherwise, and upon any lands which had been or should thereafter be leased conditionally under the Crown Lands Act of 1884; and in the event of these lands being found to contain gold or other minerals, provision was made for the cancellation of the sale or lease. The Mining on Private Lands Act, which was passed in June, 1894, provided, however, for the conversion into special leases of all permits of this kind which had been granted to owners of private lands for the purpose of removing gold, silver, lead, tin, and antimony, provided application was made within two months of the passing of the Act; and in all cases where a special lease was so obtained payment of royalty ceased. But in respect to all other minerals the payment of royalty by owners of private lands, as reserved in the permits granted under the Crown Lands Act of 1884, and the power to issue searching permits under the Mining Act of 1889, were allowed to stand. To gold-mining, all lands alienated or in process of alienation are, of course, open; but to mining for the other metals, only those lands in respect to which the rights are expressly reserved in the Crown grants. The surface of lands enclosed and under cultivation is, except with the consent of the owner, exempt from the provisions of the Act; but leases of such lands below the surface, at such depths as may be sufficient to protect the surface from damage, may be granted. Lands within the boundaries of any town or village are exempt, unless proclaimed by the Governor to come within the operation of the Act. Crown lands held under certain forms of lease, or reserved for various public purposes, also come within the scope of the Act if a special proclamation to that effect be issued.

The holder of a miner's right or a mineral license may obtain an authority, for a term not exceeding twelve months, but renewable in the discretion of the warden, permitting him to enter upon private lands for the purpose of prospecting for gold, silver, lead, tin, or antimony. The area is defined by the warden, having regard to the nature of the deposit to be sought for, and mining operations may be carried on subject to the payment of rent and compensation fixed by the warden. The rent is payable quarterly in advance. The area must not exceed 20 acres in the case of ordinary auriferous lands, nor 40 acres where the natural conditions will render mining operations difficult and costly; while for other minerals the maximum area is 80 acres. These authorities may be converted into leases, the rent payable being £1 per acre per annum. The term of the lease cannot exceed 20 years, but subject to certain conditions renewal for a similar period may be obtained. In gold-mining one man must be employed for every 5 acres; and in mining for silver, lead, tin, and antimony, one man for every 10 acres. Owners of private lands may obtain special leases for mining purposes without payment of rent. They are also privileged to enter into agreements with holders of miners' rights or mineral licenses for the latter to take possession of the land for mining purposes as if it were Crown land. In such cases it is not necessary to take out a lease under the Act; but the land must be held and worked subject to the regulations of the Mining Board in force for the time being. Subject to the approval of the Secretary for Mines, owners may also make agreements with respect to lands other than alluvial auriferous, or grant leases of the same, the area and labour conditions being similar to those fixed and imposed in connection with other leases granted under this Act. Every agreement or lease of this kind must be registered within fourteen days.

A prospecting license may be issued to the holder of a miner's right empowering him to enter upon any private lands open to gold-mining, and not otherwise utilised under the Act, for the purpose of digging and searching for gold. Before mining operations are begun a deposit must be paid to cover any damage which may be caused to the surface of the ground. If payable alluvial gold is discovered the land may be resumed by the State, the discoverer having a preferent right to a prospecting claim. The Crown has also the power to resume land containing auriferous quartz veins, provided the consent of the owner be obtained; and the prospector who discovered the vein may apply for a lease.

At the close of the year 1896, the area of private lands held under lease was 6,840 acres, while other 26,821 acres were held under application to lease. On the same date, permits to mine for gold on 150 acres of reserved lands were in existence, while the area of reserved lands held under permits to mine for other minerals was 25,546 acres.

MINERS EMPLOYED AND PRODUCTION.

The following table gives the approximate number of persons actually engaged in the principal departments of mining during each of the past seven years. The figures are given on the authority of the returns to the Mines Department:—

Minerals.	Miners employed at end of each year.						
	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Gold	10,192	12,589	11,166	9,049	11,957	17,207	21,434
Silver and silver-lead	6,587	5,806	7,645	5,889	4,709	4,208	4,658
Copper	542	716	481	500	283	645	868
Tin	1,234	2,172	1,951	1,657	2,024	1,542	1,399
Coal	10,277	10,469	10,820	10,514	10,028	9,131	9,022
Shale	138	189	260	396	385	297	354
Other minerals	214	868	185	237	736	486	564
Total	29,184	32,809	32,508	28,242	30,122	33,516	38,299

The value of mining machinery may be set down at £2,629,958. Of this, £1,126,854 represents the value of machinery and plant used in connection with coal and shale mines, £797,000 the machinery employed on the silver-fields, £638,632 that on the gold-fields, and £77,472 that on other mineral fields, principally copper and tin.

The summary given below shows the value of the production of the various minerals since their first discovery, as well as the value of minerals won in the year 1895:—

Minerals.	Value.	
	During 1895.	To end of 1895.
	£	£
Gold	1,315,929	42,326,598
Silver and silver-lead	1,642,671	20,624,595
Coal	1,095,327	30,694,051
Shale	75,219	1,761,011
Coke	24,683	162,598
Tin	87,937	6,127,972
Copper	136,969	3,870,355
Antimony	7,251	181,565
Bismuth	....	37,722
Lead (pig)	197	15,711
Oxide of iron	348	6,060
Sundry minerals	27,049	209,078
Total value £	4,413,580	106,017,316

It will be seen that the colony has produced various minerals of the total value of one hundred and six millions sterling. In connection with this estimate of production, it may be explained that the figures relating to tin and copper differ from those appearing in the report of the Department of Mines. The ores of these metals are imported in large quantities to be smelted, and the refined copper and tin, the production of this smelting, are usually exported as domestic produce, and appear as such in the mining returns. This, of course, is an error. Also, from the heading "Sundry Minerals" some of the items, such as limestone flux and building stones, which have been included in the report of the Mines Department, have been rejected in preparing the above return.

METALLIC MINERALS—GOLD.

Amongst the metallic minerals found in the colony, gold occupies a foremost place, both on account of the quantity which has been and is now being raised, and of the influence which the discovery of the royal metal has had on the settlement of the country. The date of the discovery of gold in New South Wales was for a long time the theme of much controversy, and the question as to the original discoverer was long disputed. It is now agreed, however, that the existence of gold was known to the authorities during the early days when the colony was a convict settlement, but for obvious State reasons the matter remained secret. The first authentic record of the discovery is contained in an extract from Assistant Surveyor James McBrian's Field-book, bearing date 16th February, 1823, in which the following note appears:—"At 8 chains 50 links to river, and marked gum-tree—at this place I found numerous particles of gold in the sand and in the hills convenient to the river." The river referred to is the Fish River, at about 15 miles from Bathurst, not far from the spot to which the first gold-rush was made twenty-eight years afterwards.

In 1839, Count Strzelecki found gold in the Vale of Clwydd, and communicated the discovery to Governor Gipps; but he was requested to keep the matter secret, lest the knowledge of the existence of gold should imperil the safety and discipline of the settlement. The Rev. W. B. Clarke also found gold in 1841, in the Macquarie Valley and the Vale of Clwydd, and expressed his belief that the precious metal would be found abundantly dispersed throughout the territory. But it was not until the year 1851 that payable deposits were proved to exist in New South Wales, and this important discovery was due to Mr. E. Hammond Hargraves, who, on his return some time previously from California, pointed out to the Government the localities in which he had found payable deposits of alluvial gold, viz., at Lewis Ponds and Summer Hill Creek, in the districts of Bathurst and Wellington. Prospecting operations followed in the neighbourhood, with the result of which everyone is now familiar. A few weeks later, rich deposits were discovered at Ballarat, Mount Alexander, and other gold-fields in Victoria; and the world witnessed a gold-rush from all parts of the earth to these colonies, similar to that which some years before had taken place to California.

Native gold is the only true mineral species of gold which has so far been found in New South Wales, and was first met with in easily worked alluvial deposits. These diggings have always attracted the greater number of miners, as the precious metal is obtained without costly appliances; but however rich they may be, alluvial deposits are very soon worked out, their area generally being of limited extent. In such deposits gold is found associated with a variety of minerals. It is found in the shape of grains and nuggets, water-worn in appearance, and sometimes of considerable size. Though New South Wales has not yielded nuggets of such an extraordinary size as those found in the neighbouring colony of Victoria, yet some splendid specimens of that gold formation have been unearthed at various times. Thus in July, 1851, a mass of gold was found on the Turon River gold-fields which weighed 106 lb., or 1,272 oz. This, however, though called a "nugget," was really a piece of reef gold. In November, 1858, at Burrandong, near Orange, another nugget was found, which when melted at the Sydney Mint gave 1,182 oz. 6 dwt. of pure gold, of the value of £4,389 8s. 10d. A third nugget, called the Brennan, was sold in Sydney in 1851 for £1,156. In 1880 and 1882, several nuggets which were unearthed at Temora weighed from 59 to 139 oz.; and in 1887 nuggets were found by fossickers in various parts of the country, four of which, weighing respectively 357 oz., 200 oz., 47 oz., and 32 oz., were obtained at Hargraves, and another, weighing 30 oz., at Limestone Creek. The Jubilee nugget, weighing 344 oz., was also discovered in that year at Maitland Bar, in the Mudgee District, and was worth about £1,236.

Although the alluvial deposits discovered in the early days have been practically abandoned and are considered to be worked out, there is ample evidence that the surface of the country has been merely scratched. The search for gold has been vigorously prosecuted for more than forty-five years and still new gold-fields and fresh deposits are being discovered—in localities, too, supposed to have been thoroughly examined. The gold formation is very widely diffused throughout the colony, as may be gathered from the fact that the fields of Albert, Delegate, and Ballina are between 600 and 700 miles distant from each other; and it has been estimated that the extent of country covered by formations in association with which gold always occurs, exceeds 70,000 square miles, whilst the precious metal has also been found in formations where its presence was never suspected. A considerable portion of this area, equal to nearly one-fourth of the whole surface of the colony, has never been touched by the pick of the miner.

Gold is also found in quartz-veins, occurring in older and metamorphic rocks, such as argillaceous slates, chloritic and talcose schists, as well as granite, diorite, serpentine, and porphyry. Vein gold is associated more commonly with iron pyrites, though found with copper, lead, zinc, and silver ores, and also in asbestos. But the extraction of gold from quartz-veins requires the erection of extensive machinery and gold-saving appliances, involving an outlay of capital such as the ordinary miner seldom possesses. Quartz-mining is generally carried on by companies.

Gold has been found in conglomerates in the Coal Measures at Tallawang, and in Carboniferous strata. The Rev. W. B. Clarke detected it in the Hawkesbury sandstone formation, on the north side of Sydney Harbour, and he also mentions that it is distributed through the sand at the mouth of the Richmond River. These auriferous beach sands have of late years given employment to several hundred men. Along the southern part of the coast of the colony, it has been found near the shore, in the sand washed by the waves of the Pacific Ocean; whilst at Bermagui, and in the district extending between Moruya and Eden, important discoveries have also been made. It would be impossible to name every part of the province in which gold is found, as the precious metal appears throughout the greater part of the territory, and there is ample evidence that there exist deposits which will offer to the prospector or the miner a profitable field of employment for many years to come.

Below will be found the quantity and value of the gold received for coinage at the Mint, and exported during each year, since 1851. The quantity of gold, the produce of New South Wales, received at the Sydney Mint for coinage in 1896, amounted to 203,337 oz., of the gross value of £759,853, the average price being nearly £3 14s. 9d. per oz. The gold exported during the year without passing through the Mint amounted to 92,735 oz., valued at £313,507.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	oz.	£		oz.	£
1851	144,120	468,336	1875	230,882	877,694
1852	818,751	2,660,946	1876	167,411	613,190
1853	548,052	1,781,172	1877	124,110	471,418
1854	237,910	773,209	1878	119,665	430,033
1855	171,367	654,594	1879	109,649	407,219
1856	184,600	689,174	1880	118,600	441,543
1857	175,949	674,477	1881	149,627	566,513
1858	286,798	1,104,175	1882	140,469	526,522
1859	329,363	1,259,127	1883	123,805	458,509
1860	384,053	1,465,373	1884	107,198	395,292
1861	465,685	1,806,171	1885	103,736	378,665
1862	640,622	2,467,780	1886	101,416	366,294
1863	466,111	1,796,170	1887	110,288	394,579
1864	340,267	1,304,926	1888	87,503	317,100
1865	320,316	1,231,243	1889	119,759	434,070
1866	290,014	1,116,404	1890	127,760	460,285
1867	271,886	1,053,578	1891	153,336	558,306
1868	255,662	994,665	1892	156,870	569,178
1869	251,491	974,149	1893	179,288	651,286
1870	240,858	931,016	1894	324,787	1,156,717
1871	323,609	1,250,485	1895	360,165	1,315,929
1872	425,129	1,643,582	1896	296,072	1,073,360
1873	361,784	1,395,175			
1874	270,823	1,040,329	Total	11,717,616	43,399,958

It will be seen that the production of gold in 1895 has only been surpassed in eight years since the discoveries of 1851, and that it was larger than in any year since 1873. It is a well-known fact that in years of prosperity and easily-obtained employment persons are attracted from gold-mining to other pursuits which offer fewer chan of accumulating rapid fortunes, but steadier employment and more security against loss, while the stoppage of this employment forces people to turn to mining. The depression in trade which has existed during the past few years has, therefore, had the effect of largely increasing the number of seekers after gold, many of the unemployed having been supplied by the Government with miners' rights and with railway passes to take them to likely spots where a living could be made by fossicking, on condition that the cost should be afterwards refunded when the men were in a position to pay the money. It is estimated that 4,500 men who would otherwise have remained unemployed were engaged in fossicking during 1895, and that they won some 36,000 oz. of gold in the course of the year. A large number of applications have been made by the relatives and mates of these men for assistance to join their friends, showing that at any rate many of those originally sent fossicking have found sufficient inducement to remain on the fields. The fees derived from the sale of miners' rights have, also, almost doubled since 1893, and it would appear that many men who in the first instance were granted rights on credit have been enabled to pay for them or for their renewal. The comparatively large production in 1895 was chiefly due to a "bonanza" struck in one of the principal mines.

In other directions much enterprise has been shown during the last few years in the search for gold, and quartz reefs have been opened up in many parts with profitable results. Old workings, which had been abandoned years before, under an impression that they were valuable only on the surface, and which had scarcely, in any instance, been tested to a greater depth than 200 feet, have been reopened with very encouraging results, and quartz-mining is becoming more and more a permanent industry, the yield from that source being now four and a half times as great as it was five years ago. On the other hand, the number of men engaged in alluvial mining and the returns therefrom showed no tendency to increase until the past two years, when a large number of fossickers gave a fillip to this branch of gold-mining. The following table shows the number of men employed in alluvial and in quartz-mining, with the production from each branch of the industry, since the year 1888. All the men employed in quartz-mining were Europeans, but on alluvial fields 833 Chinese found occupation in 1895 :—

Year.	Number of Miners.		Production.	
	Alluvial.	Quartz.	Alluvial.	Quartz.
	No.	No.	oz.	oz.
1888	4,368	3,910	43,905	43,598
1889	5,623	4,569	39,412	80,347
1890	6,304	6,285	63,879	63,881
1891	4,748	6,418	50,713	102,623
1892	4,030	5,019	35,024	121,846
1893	6,401	5,556	55,336	123,952
1894	8,742	8,465	93,742	231,045
1895	11,331	10,103	81,645	278,520

The principal seats of alluvial gold-mining are the Bathurst and Mudgee districts, and the country watered by the various feeders of the Upper Lachlan, and also in the Tumut and Adelong and Braidwood districts. In 1880, the Temora gold-fields, in the Murrumbidgee district, about 30 to 40 miles from the inland town of Wagga Wagga, were discovered, and were for some years in a flourishing condition. The district is now drifting from mining into an important agricultural settlement. In the north of the colony, in the New England district; on the coast, in the county of Gloucester; and in the extreme north-west, at Mount Poole, Mount Browne, and Tibooburra, the gold-fields maintain a considerable population of miners. The system of hydraulic sluicing is adopted in only two or three mines in the New England district; at Kiandra, on the southern table-lands, where extensive reservoirs have been formed, and the face of the rocks attacked in various places; at Nelbothery, near Bombala, where the Delegate River Hydraulic Sluicing Company have erected machinery capable of lifting 4,500,000 gallons of water to a height of 330 feet in twenty-four hours; in the Adelong Creek, near Adelong; and in the Shoalhaven valley, where large sums have been expended by companies in endeavouring to bring water to bear for sluicing several promising beds of alluvium.

The principal quartz-veins are situated near Adelong, Armidale, Bathurst, Hill End, Orange, Parkes and Wyalong. The districts which produced the largest quantities of gold during 1895 were—Orange, 83,440 oz., nearly all from Lucknow; Wyalong, 24,497 oz.; Hillgrove, 21,617 oz.; Parkes, 10,373 oz.; Cobar and Mount Drysdale, 10,000 oz.; Peak Hill, 8,192 oz.; Wellington (Mitchell's Creek), 7,821 oz.; Hillgrove West, 7,588 oz.; Temora, 7,473 oz; Pambula, 7,400 oz.; Mudgee, 7,146 oz.; Fairfield, 6,747 oz.; Nundle, 5,770 oz.; Broken Hill and Silverton, 4,650 oz.; Adelong, 4,623 oz.; Hill End, 4,360 oz.; Garangula, 4,302 oz.; and Gulgong, 4,000 oz. Besides the Mount Drysdale gold-field, in the Cobar district, discovered in 1893, the most important find of recent years was made at Wyalong, in the Lachlan district. The first prospecting claim on this field was registered on the 26th December, 1893; a great rush at once ensued, and in the early part of 1894 there were probably more than 10,000 persons on the ground. This number has now been reduced to reasonable proportions, and in 1895 the production from the field was only exceeded by that derived from the Orange district, and showed an increase of 14,848 oz. on the yield of the previous year. It was considered at the end of 1895 that there were ninety payable claims on the field. Another new field was discovered in 1894 at Garangula, near Murrumburrah, which in the following year yielded 4,302 oz. At Yalwal, in the Southern district, a considerable quantity of gold was won, but the actual returns are not available. It may be pointed out that, as shown above, the Broken Hill Proprietary Company saved during the year 4,650 oz. gold from their silver-lead bullion.

Rasp, a boundary rider on Mount Gipps Run, extends over 2,500 square miles of country, and has developed into one of the principal mining centres of the world. It is situated beyond the river Darling, and on the confines of the neighbouring colony of South Australia. In the Barrier Range district the lodes occur in Silurian metamorphic micaceous schists and banded gneisses, intruded by granite, porphyry, and diorite, and traversed by numerous quartz reefs, some of which are gold-bearing. The Broken Hill lode is the largest as yet discovered. It varies in width from 10 feet to 200 feet, and may be traced for several miles, the country having been taken up all along the line of the lode, and subdivided into numerous leases, held by mining companies and syndicates.

The Broken Hill Proprietary Company hold the premier position. They have erected on their lease a complete smelting plant on the latest and most approved principles, and have enlisted the services of competent managers, whose experience has been gained in the celebrated silver-mining centres of the United States. From the commencement of mining operations in 1885 to the end of November, 1896, the Company treated 3,093,233 tons of silver and silver-lead ores, producing 83,910,613 oz. of silver and 313,631 tons of lead, valued in the London market at £16,280,625. They have paid dividends and bonuses to the amount of £6,272,000, besides the nominal value of shares from the several "Blocks." The sum spent in the erection and construction of plant, from the opening of the property, is £724,289. The mine wages and salary sheet for the twelve months was £418,176, including £71,209 paid to contractors and £67,345 for quarrying. The balance of £279,622 was made up of mine wages 92,197; smelters' wages, £109,383; amalgamation, lixiviation, chloridising, concentration and refinery wages, £75,130; and electric light wages, £2,912. The net profit for the year was £397,859.

Besides the mines at Broken Hill, there are workings at Silverton and Thackaringa in the same district. The total value of minerals exported from the Barrier district during 1895 was £1,644,563, distributed as follows:—Silver ingots (pure), 472,449 oz., valued at £57,804; silver-lead bullion, 29,684 tons, £959,562; silver-lead ore, 189,133 tons, £587,255; copper ore, 23 tons, £112; copper matte, 1,004 tons, £21,230; and gold, 4,650 oz., £18,600. The quantity of pure silver contained in the items enumerated amounted to about 8,669,000 oz.

As a natural consequence of the success of these mines, numbers of miners were attracted to the district, and the population, which in 1883 consisted of only a few station hands, had risen to a total of 24,438 souls at the date of the 1891 census, of whom 6,465 men were employed in and about the mines. The population of the district is now estimated, however, at less than 20,000. The aggregate output of the mines, including the Proprietary, to the end of 1895, was valued at £19,435,150; and the value of the machinery in the Barrier district at the end of the year was £799,000. The proximity of Silverton and the Barrier district to the colony of South Australia could not fail to attract the attention of the business people at Adelaide, who were not slow to realise the advantages which they would obtain by attracting towards their capital the traffic of a region of such immense wealth. The railway system of South Australia was immediately extended to the border, and in the colony of New South Wales a tramway was laid down, thus connecting the town of Silverton and the mines of Broken Hill with the railway to Adelaide and Port Pirie, in the latter instance reducing the land carriage by some 70 to 80 miles.

A company has been formed in London for the purpose of acquiring the rights in New South Wales of a new process for the treatment of sulphide ores. Works are in course of construction at Lake Illawarra, and it is intended to smelt refractory gold ores as well as silver ores. The machinery will be capable of treating 200,000 tons yearly. Another company is erecting at Cockle Creek, near Newcastle, electro-metallurgical works, which are expected to give employment to a large number of men. The process to be adopted at the Sulphide Corporation's works at Cockle Creek is that known as Ashcroft's, and is a most remarkable and interesting one. The capital of the company is £1,000,000; and the result of their operations will be watched with the very greatest interest, as it is considered that Mr. Ashcroft's discovery is one of the most remarkable of the century.

The quantity and value of silver and silver-lead ore exported from New South Wales to the end of 1895 is shown in the following table:—

Year.	Silver.		Silver Lead.			Total Value.
	Quantity.	Value.	Quantity.		Value.	
			Ore.	Metal.		
	oz.	£	tons cwt.	tons cwt.	£	£
Up to 1881	726,779	178,405	191 13	....	5,025	183,430
1882	38,618	9,024	11 19	....	360	9,384
1883	77,066	16,488	105 17	....	1,625	18,113
1884	93,660	19,780	4,668 1	....	123,174	142,954
1885	794,174	159,187	2,095 16	190 8	107,626	266,813
1886	1,015,433	197,544	4,802 2	....	294,485	492,029
1887	177,308	32,458	12,530 3	....	541,952	574,410
1888	375,064	66,668	11,739 7	18,102 5	1,075,737	1,142,405
1889	416,895	72,001	46,965 9	34,579 17	1,899,197	1,971,198
1890	496,552	95,410	89,719 15	41,319 18	2,667,144	2,762,554
1891	729,590	134,850	92,383 11	55,396 3	3,484,739	3,619,589
1892	350,662	56,884	87,504 15	45,850 4	2,420,952	2,477,836
1893	531,972	78,131	155,859 1	58,401 3	2,953,589	3,031,720
1894	846,822	94,150	137,813 8	42,513 2	2,195,339	2,289,489
1895	550,142	81,858	190,192 19	29,687 0	1,560,813	1,642,671
Total	7,220,737	1,292,838	836,583 16	326,040 0	19,331,757	20,624,595

As the bulk of the silver is exported in the form of silver-lead bullion and ore, it is impossible to ascertain the exact quantity of pure silver won until the product has been realised in London. A calculation based on figures given in the reports of the Broken Hill Proprietary Company, warrants, however, the statement that the total value of £20,624,595, shown in the above table, was approximately made up of 105,569,200 oz. of pure silver, value £15,799,970, and of 401,200 tons of lead, value £4,824,625. Owing to the steady fall in the price of silver, which had already set in before the opening up of the Broken Hill mines, and which, after a slight recovery in 1890, has since been accentuated by the closing of the Indian mints to the coinage of silver, the value of the output has not increased in the same ratio as its quantity. Even at the already low prices of 1890, the value of the 1895 output would have been worth £980,000 more than the figure at which it is set down. The consequences of the rapid fall during the last few years have been the closing of some of the smaller mines, the non-payment of dividends in others, and the reduction of dividends and working expenses, and consequently diminished employment, in the largest mines. In 1895, however, the price of silver was rather higher than in 1894. The great fall in production during 1895 was principally due to the stoppage of work at the Proprietary mine for some time in consequence of the outbreak of fire in the underground workings.

An attempt has been made to calculate the cost of producing an ounce of silver at the Broken Hill Proprietary Company's Mine since 1888. The process adopted has been to ascertain the weight of silver to which the lead in the ore is equivalent at the current price of each metal, to add to this the weight of silver contained in the ore, and to place the cost of production against the nominal weight of silver so ascertained. Thus, during the three working years ended May, 1891, the average yield of silver per ton of ore treated was 37·56 oz. The value of the lead obtained from the ore was £2·23, equal to about 11·02 oz. of silver at 48·62d. per oz. This quantity, added to 37·56 oz. gives a nominal result of 48·58 oz. The average cost of production was £4·05 per ton of ore, which for 48·62 oz. is equivalent to 20·03d. per oz. The average prices of these metals since 1888 have been as follow:—

Period.	Price of Silver per oz.	Price of Lead per ton.
	d.	£
June, 1888, to May, 1891	48·62	13·90
June, 1891, to May, 1893	44·53	12·06
June, 1893, to May, 1896	33·13	11·85
Half-year ended May, 1896	33·44	11·08

Adopting the empirical method explained above, the following table shows the cost of producing silver at Broken Hill during the same periods :—

Period.	Cost of producing Silver per oz.
	d.
June, 1888, to May, 1891	20·03
June, 1891, to May, 1893	21·58
June, 1893, to May, 1896	19·85
Half-year ended May, 1896	23·79

The cost of raising and treating the ore has fallen during the eight years from £4·05 to £2·30, while the cost of obtaining silver has increased from 20·03d. to 23·79d. per oz. The reason of this will be seen from the following table, which shows that the results per ton of ore have fallen from 37·56 oz. of silver and 3·21 cwt. of lead during the first three years to 21·98 oz. of silver and 1·51 cwt. of lead during the last three, or to 18·84 oz. of silver and 1·10 cwt. of lead if the last half-year be taken by itself :—

Period.	Results per ton of Ore.		Cost of raising and treating 1 ton of ore.
	Silver.	Lead.	
	oz.	cwt.	£
June, 1888, to May, 1891	37·56	3·21	4·05
June, 1891, to May, 1893	30·13	2·39	3·41
June, 1893, to May, 1896	21·98	1·51	2·35
Half-year ended May, 1896	18·84	1·10	2·30

The number of miners engaged in silver and silver-lead mines in 1895 was 4,658, and the average value of mineral won, per miner engaged, amounted to £352 13s. 1d., as compared with £544 1s. 7d. in 1894.

The total number of accidents which took place in the silver-mines of New South Wales during the course of the year 1895 was 57, 20 persons losing their lives, 17 suffering severe injuries, and 20 meeting with slight injuries. These figures are much higher than usual, on account of an accident in the South Broken Hill mine by which 9 lives were lost. In most years the casualties form but a very small proportion of the persons engaged in silver-mining, while the elements of danger are great, and this must be taken as reflecting considerable credit on the management of the mines.

The world's production of silver during the ten years ended 1895 has been estimated as follows:—

Year.	Ounces.	Year.	Ounces.
1886	93,276,000	1891	137,171,000
1887	96,124,000	1892	152,940,000
1888	108,827,000	1893	162,162,000
1889	120,214,000	1894	178,668,000
1890	126,095,000	1895	181,851,000

The annual output of New South Wales is, therefore, about one-tenth of the total production of silver.

TIN.

Lode tin occurs principally in the granite, and stream tin under the basaltic, country in the extreme north of the colony—at Tenterfield, Emmaville, Tingha, and in other districts of New England. The metal has also been discovered in the Barrier District, at Poolamacca and Euriowie; near Bombala, in the Monaro district; at Gundle, near Kempsey; at Jingellie, on the Upper Murray; at Dora Dora, on the Upper Murray; and in the valley of the Lachlan; but in none of these districts has it been worked to any extent. Although the first discovery was made by the Rev. W. B. Clarke as far back as 1853, the opening of tin-fields in the colony did not take place until the year 1872, from which date to the year 1882 the production, for which the net export is taken, increased rapidly, as may be seen from the following statement:—

Year.	Value.	Year.	Value.
	£		£
1872 to 1876	1,032,483	1887	311,889
1877	248,906	1888	309,510
1878	214,613	1889	207,670
1879	256,732	1890	179,057
1880	354,252	1891	133,963
1881	568,795	1892	152,994
1882	541,413	1893	126,114
1883	448,887	1894	85,264
1884	281,188	1895	87,937
1885	308,760		
1886	277,545	Total	6,127,972

It will be seen that tin has contributed in a very considerable degree to the general development of the natural wealth of the colony, and in point of value its aggregate production stands in the fourth place—next to gold, coal, and silver. For the years 1881 and 1882 the value of the production of tin was even in excess of that of gold; the export during 1894 and 1895, however, was the smallest since the opening of the tin-fields. Although tin-mining is now one of the settled industries of the country, and the supply is practically unlimited, the quantity raised depends almost entirely upon the price realised.

In 1881, when the industry was at its greatest height and prosperity, the export had increased to £568,795 from £249,779 in 1876. In 1882 the production was but £27,000 less; but after that year, owing to protracted dry seasons, which in many cases prevented mining operations, combined with the comparatively low price which the metal brought, the value of the output fell considerably. Another cause of diminished production is that the shallow deposits of stream-tin have to a great extent been exhausted, although the deep deposits and the tin-lodes have as yet scarcely been touched, nearly all the metal hitherto produced having been taken from alluvial deposits. The principal lodes worked during 1895 were the Vegetable Creek Tin-field, near Emmaville; at Tent Hill; at the Mann River, near Glen Innes; at Wilson's Downfall; and at Tingha. Within the twenty-four years that have elapsed since the opening of the tin-fields, the value of the exports has been £6,127,972.

In the alluvial tin-fields of Tingha and Emmaville, the number of Chinese engaged in this industry has in some years greatly exceeded the Europeans. In 1895, however, the Chinese at Emmaville numbered only 260, whilst the Europeans working alluvial tin-drifts and tin-lodes numbered 350. The total number of miners employed in tin-mining in the colony was 1,399, viz., 871 Europeans and 528 Chinese, nearly all of whom were employed in the Northern Districts. No accidents occurred in tin-mines during 1895.

COPPER.

The principal deposits of this mineral are found in the central part of the colony, between the Macquarie, Bogan, and Darling Rivers. Deposits have also been found in the New England and Southern districts, as well as at Broken Hill, showing that the mineral is widely distributed throughout the colony. The very low price of copper within the last few years has deterred many from embarking in operations which otherwise showed every promise of success, and some of the mines which have been worked for many years are closed. The principal difficulty, common to other branches of the mining industry, lies in the great distance of some of the chief copper-mines from the port of shipment, and the consequently heavy cost of land carriage. With a reduction in the cost of production and of carriage, the copper-lodes of New South Wales, which contain ores of a very much higher percentage than those of many well-known mines worked at a profit in other parts of the world, should return satisfactory results, notwithstanding the very large fall in price which has taken place since the failure of the copper syndicate in 1888.

The more important mines are those of Cobar, where the Great Cobar mine, which re-commenced work early in 1894, raised in the following year 37,845 tons of ore, yielding 1,703 tons of smelted copper. It may be mentioned that the copper extracted from this mine is found to contain gold more than sufficient to pay for mining and treating the ore. The company employed an average of 415 men during the year. The Nymagee Copper-mining Company employed 150 men, and raised 5,845 tons of ore, yielding 485 tons of smelted copper. The Burraga Company produced 331 tons of copper; while the production of Mount Hope was 278 tons, and of Captain's Flat 350 tons. The Broken Hill Proprietary Company also saved 23 tons of copper and 1,004 tons of copper matte. No doubt a small advance in the price of the metal would cause increased activity in the copper-mines of the colony.

The net export of copper, which is taken as the production of the colony, is shown below from the year 1859 :—

Year.	Value.	Year.	Value.
	£		£
1859 to 1876	408,071	1887	115,444
1877	127,396	1888	247,304
1878	209,030	1889	122,444
1879	210,623	1890	84,107
1880	268,700	1891	119,195
1881	257,884	1892	114,559
1882	182,473	1893	73,287
1883	472,982	1894	63,617
1884	362,287	1895	136,969
1885	170,993		
1886	122,990	Total......	3,870,355

It will be seen that the value of the export during 1894 was less than in any previous year given, a fact doubtless caused by the closing of many small mines owing to the unremunerative price of the metal. The industry, however, received a fillip during 1895, in consequence of activity at the Great Cobar Mine, and the value of the export was more than twice as high as in the previous year.

The total number of miners engaged in copper-mining in 1895 was 868. There was one fatal accident recorded in such mines during the year, and two miners suffered slight injuries.

IRON.

Iron is widely diffused throughout the colony, and occurs principally in the form of magnetite, brown hematite or goethite, limonite, and bog-iron. Deposits of chrome iron are also found. Magnetite is the richest of all the iron ores, sometimes containing a little over 72 per cent. of available metallic iron, though it is not often found reaching this very high percentage. These ores are widely distributed throughout New South Wales. The results of a number of analyses made from deposits at Brown's Creek, in the county of Bathurst, and at Wallerawang, where veins were opened out a few years ago, show that the samples of ore yielded from 40·89 to 56·85 per cent. of metallic iron. At Wallerawang, a variety of garnet, containing a large percentage of metal, occurs in conjunction with the ore in the veins, which is described as "extremely well adapted for reduction in the blast furnace." Brown hematite or goethite occurs in very extensive deposits in the Blue Mountain Ranges, the principal centres so far explored being situated at Mittagong, Picton, Berrima, Lithgow Valley, Wallerawang, in the Rylstone and Mudgee Districts, and in the vicinity of Port Stephens. The result of a number of analyses of this kind of ore denotes that it is very rich in metallic iron, containing a percentage of 42·69 to 64·48 per cent., and in the majority of cases over 55 per cent. of metal. A sample of hematite from the Maitland district contained 60·83 per cent. of metallic iron. A sample of brown hematite from Mount Pleasant, near Wollongong, analysed during 1891, gave 54·28 per cent. of iron. The value of these deposits is enhanced by their almost invariable occurrence in proximity to limestone and coal-beds. It is fortunate, also, that the main lines of railway pass through the regions where the deposits are most easily worked.

Limonite—a variety of brown hematite—principally occurs at Lithgow, Eskbank, and Bowenfels, in the Blue Mountains; in several parts of the Hunter River coal-field; and at Bulli, in the Illawarra District. This ore is usually found very rich in metal, and contains an average of over 50 per cent. of iron; while the English clay bands, which are mostly carbonates, only contain about 30 per cent. of metallic substance. It occurs in lenticular layers of no great extent, in the Coal Measures. Bog-iron-ore, which is impure limonite, is principally found at Mittagong; and assays of this ore gave an average percentage of metal of more than 45 per cent.

None of the other southern provinces possesses deposits of iron-ore approaching in extent or richness those of New South Wales. It is therefore probable that at some future time this colony will become the great seat of the iron industry of Australia. As illustrating the present extent of the supply required, the following table, showing the value of all descriptions of iron, machinery, and iron manufactures imported into the various colonies during the five years, 1891–95, has been compiled:—

Colony.	1891.	1892.	1893.	1894.	1895.	Average Yearly Import, 1891–95.
	£	£	£	£	£	£
New South Wales	3,686,001	2,574,122	1,531,839	1,189,249	1,219,096	2,040,061
Victoria	1,678,064	1,038,425	715,271	699,696	665,148	959,321
Queensland	618,179	521,701	363,624	496,029	691,215	538,150
South Australia	802,904	561,315	405,214	349,945	349,826	493,841
Western Australia	234,241	221,652	354,759	355,890	587,063	350,721
Tasmania	297,494	208,924	153,771	104,969	117,946	176,621
New Zealand	855,599	1,000,915	920,626	836,589	781,602	879,066
Australasia	8,172,482	6,127,054	4,445,104	4,032,367	4,411,896	5,437,781

The average yearly import for the five years covered by the above statement amounts to £2,040,061 for New South Wales, and £5,437,781 for Australasia; and the quantity of pig-iron required to produce the material represented by these values is approximately 148,000 tons and 394,000 tons per annum for New South Wales and the whole group of colonies respectively. In a report, dated January, 1891, by the late Mr. C. S. Wilkinson, Government Geologist, it is stated that the iron deposits in the districts of Mittagong, Wallerawang, and Rylstone contained in sight 12,944,000 tons of ore, estimated to yield 5,853,000 tons of metallic iron. These districts are most favourably situated for the establishment of smelting works. Some years ago public attention in England was drawn to the possibility of manufacturing iron within the colony, and a mining expert was sent out from that country to inspect the iron, lime, and coal deposits, and to report upon the probable cost of establishing the industry in the colony, but so far the visit has been without result.

The principal works for the manufacture of iron from the ore are situated at Eskbank, near Lithgow, where red siliceous ore, averaging 22 per cent., and brown hematite, yielding 50 per cent. metallic iron, have been successfully treated. Abundance of coal and limestone are found in the neighbourhood. This establishment, however, has for some time abandoned the manufacture of pig-iron, for which it was originally built. The work now carried on consists of the re-rolling of old rails, and the manufacture of iron bars, rods, and nails, and of ordinary castings. The quantity manufactured from scrap during 1895 was 2,403 tons, valued at £15,620. A successful attempt has been made at Mittagong to make gas-pipes, etc., from iron smelted from the ore, and taken direct to the mould, without first making it into pig-iron. Some years ago the iron smelting works at Fitzroy, Mittagong, were established, but after producing a considerable quantity of pig-iron the operations were discontinued. Some samples of ore, coal, and limestone obtained in this district, with pig-iron and castings manufactured therefrom, were exhibited at the late Mining Exhibition in London, and obtained a first award. Iron ore is raised in some places in the colony, but is used chiefly for the purpose of flux.

During the year 1893, Parliament agreed to a resolution for the manufacture of 30,000 tons of iron piping in the colony, and portions of the work have since been let by tender as opportunity offered. In 1896 tenders were called by the Government for the supply of 150,000 tons of steel rails, with the necessary quantities of fish-plates, fish-bolts, and spikes, to be manufactured in New South Wales, from iron ore and other necessary minerals produced in the colony. The tenders closed on the 30th December of that year. The specification provides for the delivery of 15,000 tons per annum, in equal monthly quantities, the first delivery to take place not later than eighteen months after the signing of the contract.

ANTIMONY.

Deposits of antimony occur in the colony in various places, chiefly in the Armidale, Bathurst, and Rylstone districts; and at Bowraville on the North Coast. The principal centre of this industry is at Hillgrove, near Armidale, where the Eleanora Mine, one of the richest in the colony, is situated. The ore is also worked for gold. The results of a number of analyses, made by the authorities of the Geological Museum, show from 29·57 to 79·45 per cent. of metal; but, notwithstanding these encouraging assays, the price has not been sufficiently high to tempt Australian producers. A considerable quantity of antimony was raised some years ago at the Corangula mines, in the Macleay district, but these mines are at present idle. Lodes have also been opened and partly worked near Nambucca, Drake, Gulgong, and Razorback. The value of antimony raised during 1895 was £7,251, and up to the end of that year, £181,565. With the exception of 50 tons, valued at £500, raised at Bowraville, the production in 1895 was obtained at Hillgrove. The industry suffered greatly during the year from the low price of the metal, and the output is not likely to improve until the price takes an upward tendency.

MANGANESE.

Deposits of manganese ore have been discovered in various parts of New South Wales. Pyrolusite, in the form of black oxide and manganese dioxide, occurs principally in the Bathurst districts and at Bendemeer. Wide veins have also been found in the Glen Innes district, near the Newton-Boyd road. Some of the specimens analysed have yielded a very high percentage of metal; but the demand for manganese in the colony is very trifling, and until a foreign market is found, or local manufactories requiring the metal spring up, the rich deposits of this ore will remain comparatively untouched. The ore is found extensively in conjunction with iron in coal and lime-stone country, and often contains a small percentage of cobalt.

BISMUTH.

Bismuth is found associated with molybdenum and gold, in quartz-veins, in the neighbourhood of Glen Innes, whence the quantity raised has been chiefly obtained. The principal mines are situated at Kingsgate, where the mineral occurs in a granitic formation, associated with molybdenum, mispickel, and tin; but at the present time they are practically closed, there being little demand for the mineral in London, only 2 tons 9 cwt. being forwarded there in 1895. It is stated that in the Nymagee district promising indications of payable deposits have been found. The largest mass of native bismuth yet discovered in the colony weighed more than 30 lb. The value of this metal exported up to the end of 1895 was £37,722.

PLATINUM.

Platinum and the allied compound metal Iridosmine have been found in New South Wales, but so far in inconsiderable quantities, the latter occurring commonly with gold or tin in alluvial drifts. It is believed that the beach deposits at Ballina and other places on the northern coast might, with improved appliances, be profitably worked for platinum. Fifteen cwt. of sand from this district were forwarded in 1891 to platinum merchants in London for treatment. The tests made proved, however, that the small percentage of metal found and the cost of extraction barely leave a margin of profit. On the northern beaches, a little platinum is being obtained by the miners who are working the black sand for gold. The metal has also been discovered at Fifield, in the Parkes district, and in lodes near Broken Hill and Orange. At Fifield, in 1895, 413 oz. were produced, the value being 23s. per oz. The Fifield platinum occurs in coarse shotty grains, and is much purer than that obtained from the northern beach-sands.

OTHER METALS.

Mercury, in the form of cinnabar, has been discovered on the Cudgegong River, near Rylstone, and it also occurs at Bingara, Solferino, Yulgilbah and Cooma. In the latter place the assays of ore yielded 22 per cent. of mercury, but none of the deposits have been much worked. In all cases it was associated with gold and other minerals.

Deposits of cobalt have been found at Bungonia, Carcoar, and Port Macquarie; but the market for the metal is small, and no attempt has yet been made to produce it on any large scale.

Chromium is found in the northern portion of New South Wales, in the Clarence and Tamworth districts, and also near Gundagai. It is usually associated with serpentine. In the Gundagai district the industry is rapidly becoming a valuable one. During 1895 it afforded employment to fifty men, and the production reached 5,500 tons, valued at £20,000. The exports of chrome ore during the year amounted to £13,048.

Tellurium has been discovered at Bingara and other parts of the northern districts, as well as at Tarana, on the Western Line, though at present only in such minute quantities as would not repay the cost of working. It has also been found at Captain's Flat, in association with bismuth.

At Berridale, in the Snowy River district, a lode has been tested for wolfram. The metal, which is a compound of tungstate of iron and manganese, has also been found in the New England district.

Zinc is found usually associated with silver, lead, and copper, but the metal has not yet been profitably worked.

Deposits of pigments are found near Mudgee and Dubbo, and also in the Orange district, where a fair quantity of the raw material, consisting principally of purple oxide and yellow ochre, has been produced.

NON-METALLIC MINERALS—COAL.

The carboniferous formations extend over a considerable portion of the colony, and workable coal-seams have been discovered in many places. At present, however, the coal-mining industry is confined to those centres which, from their close proximity to ports of shipment or the railway lines, afford ready means for the disposal of the commodity when raised.

Coal was first discovered in the colony in the year 1797 near Mount Keira, in the Illawarra district, by a man named Clark, supercargo of the Sydney Cove, while he was endeavouring to reach Sydney by way of the coast after the wreck of that vessel in Bass' Strait. Later in the same year Lieutenant Shortland discovered the River Hunter, with the coal-beds situated near its mouth, and mining operations in this district, begun in 1826, have reached large dimensions.

The deposits which have been found in the Blue Mountains, near the line of railway which runs along their crest, at Katoomba, Lithgow, Wallerawang, and elsewhere, now supply a portion of the requirements of Sydney and other industrial centres in its neighbourhood, as well as part of the western district of the colony. Coal is also mined at Berrima and other places in that district, whence a large quantity of the coal consumed in the southern districts of the colony is obtained. The area over which coal is distributed is very great, and has been computed at 23,950 square miles; besides this, it is known to underlie the Hawkesbury sandstone in and around Sydney. The diamond-drill was used at Cremorne Point, near Mossman's Bay, for the purpose of ascertaining whether coal existed beneath the metropolis. A depth of 3,095 ft. was reached, the deepest bore yet put down in Australia. Coal was met with, but the work was discontinued, as there was every reason to believe, from the position of two doleritic dykes met with, that a volcanic disturbance, such as is often found in the Southern coal-fields, had occurred at that particular spot. It was considered to have been proved that the Illawarra coal measures extended under Sydney, and it was resolved to put down another bore about half a mile distant from the previous one, and midway between the two dykes. The new bore-hole was the largest ever attempted in Australia, the boring-bit being $5\frac{1}{2}$ in. in diameter, and capable of bringing up a $4\frac{1}{8}$-in. core. A commencement was made with this work at the end of 1891, and, after carrying the bore down to a depth of 2,929 ft., a very valuable discovery of good steam coal was made. The seam is 10 ft. 3 in. in thickness, 9 ft. 2 in. of it being workable. A company to work the mine has [illegible] with a nominal capital of £300,000, and sinking operations have been begun at Balmain. A coal seam 6ft. 6½ in. thick has been found on the Moorbank Estate, near Liverpool, at a depth of 2,583 ft. Coal has also been found in the Clarence series, though it has not yet been worked commercially. Three seams have been proved at Coraki, on the Richmond River. Several parties have exploited this district for coal, and at the mine at Aberdare 150 tons of good coal have been obtained from a seam 6 ft. thick. The quantity of coal in the coal measures down to a depth of 4,000 ft., and excluding seams less than 30 in., is estimated by the Government Geologist at 78,198 million tons. This estimate allows for one-third loss in working.

In 1826, the Australian Agricultural Society obtained a grant of 1,000,000 acres of land, together with the sole right, conferred by charter, of working the coal-seams which were known to exist in the Newcastle district. Several mines were opened up, and profitably worked for a number of years; but it was not until the expiration, in 1847, of the monopoly enjoyed by the company that the coal-mining industry showed signs of extensive development. During the year named the output of coal only reached the total of 40,732 tons, of the value of £13,750. Six years afterwards the production had been doubled, and the output of this mineral has rapidly increased year by year until coal-mining is now one of the staple industries of the colony. Newcastle is singularly well fitted by situation to become the port of supply for all the countries of the southern seas. Every week coal-laden vessels leave its wharfs, not only for the Australian colonies, but for China, India, the Pacific Slope of North and South America, Mauritius, the Cape of Good Hope, and other lands. Every provision has been made by the Government for shipping coal, and over two miles of wharves, furnished with cranes and shoots capable of loading over 28,000 tons per day, line its shores. The markets of the colonies are also supplied with quantities of excellent coal from the seams worked in the Illawarra district.

From the 40,732 tons extracted in 1847, the quantity raised had in 1891 expanded to the large figure of 4,037,929 tons, valued at £1,742,796. This is the largest output ever reached in a single year. The production in 1892—3,780,968 tons, valued at £1,462,388, was the second largest in point of quantity, but not of value.

There was a further fall in 1893 to 3,278,328 tons, valued at £1,171,722; but in 1894 the production again took an upward tendency, and in 1895 stood at 3,738,589 tons, of a value of £1,095,327. Although this quantity has only been exceeded in 1891 and 1892, the fall in prices has placed the value below that of every year since 1882. To the end of 1895, the total quantity of coal extracted from the New South Wales mines, from their opening in the early years of the century, amounted to 68,372,749 tons, valued at £30,694,051.

The number of coal-mines registered in New South Wales during 1895 was 94, as compared with 91 in the previous year. They gave employment to 9,022 persons, of whom 7,438 were employed under ground, and 1,584 above ground. The average quantity of coal extracted per miner was 503 tons, as against an average of 492 tons for the previous year, and 396 tons for 1893. The low average for 1890, only 368, is accounted for by the strike that occurred during that year; but a tendency to decline had been exhibited since 1882, when the average per miner was 578 tons. In 1895, owing to the smaller number of miners employed, and the increased output as compared with most of the preceding years, the average was the highest since 1885, when it was 511 tons.

Below will be found the quantity of coal raised in the colony, and the number of coal-miners employed, during each of the last ten years. Calculated on the total value of the coal produced during the decade, the average quantity of 440 tons extracted yearly by each person employed underground represents a value of £175 10s. 8d., and for the total number of persons employed, £143 0s. 3d. In 1895 the average value of production was £147 5s. 3d. for each person employed underground, and £121 8s. 1d. for each person employed in any capacity about the mines:—

Year.	Persons employed in and about mines.	Persons employed under-ground.	Quality of Coal raised.		
			Total.	Per person employed in and about mines.	Per person employed under-ground.
	No.	No.	tons.	tons.	tons.
1886	7,847	6,346	2,830,175	360	446
1887	7,998	6,539	2,922,497	365	447
1888	9,301	7,622	3,203,444	344	420
1889	10,277	8,349	3,655,632	356	438
1890	10,469	8,311	3,060,876	292	368
1891	10,820	8,718	4,037,929	373	463
1892	10,514	8,624	3,780,968	360	438
1893	10,028	8,267	3,278,328	327	396
1894	9,131	7,461	3,672,076	402	492
1895	9,022	7,438	3,738,589	414	503
Average for 10 years	9,541	7,768	3,418,051	358	440

It is believed that the industry is still suffering to some extent from the effects of the strikes in 1887 and 1890, which not only caused a temporary suspension of trade, and deprived the colony of the benefit of hewing and handling some 600,000 tons of coal, but induced buyers to seek other markets for the supply of their requirements. Among other things, this promoted the development of the coal-mines in Japan, where, owing to the cheapness of labour, coal can be produced, though possibly of inferior quality, at a price which makes it a formidable competitor to Australian coal. Still, as before explained, the output in 1891 was the largest on record, and the export for the year, 2,514,368 tons, exceeded that of the previous year by 692,494 tons, and even that of 1889, until then the highest on record, by 126,666 tons. In 1892, the total export amounted to 2,191,705 tons; in 1893, to 1,835,090 tons; in 1894, to 2,125,125 tons; and in 1895, to 2,166,230 tons. A comparison of the figures for 1894 and 1895 shows that there was an increase in the latter year in the export to inter-colonial and foreign ports, as well as in the home consumption.

Northern District.—In the Northern or Hunter River District the number of collieries under official inspection in 1895 was 64, employing a complement of 6,777 persons, 5,605 of whom were miners, wheelers, etc., employed underground. The quantity of coal raised amounted to 2,631,222 tons, or fully 70 per cent. of the whole production of New South Wales. This was an increase of 26,079 tons over the figures for the previous year, but 222,030 tons less than the output of 1891, the highest on record.

The following table shows the growth of the coal industry within the last ten years in the Hunter District. The quantity of mineral raised and the number of persons employed steadily increased up to the year 1888, when the production was interfered with by strikes; both the number of men employed and the quantity of coal raised have fluctuated since. The output in 1891 was higher than in any previous year, while in 1895 it was the second highest on record:—

Year.	Persons employed in and about mines.	Persons employed under-ground.	Quantity of Coal raised.		
			Total.	Per person employed in and about mines.	Per person employed under-ground.
	No.	No.	tons.	tons.	tons.
1886	6,133	5,044	2,178,116	355	432
1887	6,287	5,217	2,243,792	356	430
1888	6,873	5,736	2,067,042	300	360
1889	7,559	6,216	2,624,347	347	422
1890	7,874	6,345	2,120,046	269	334
1891	8,309	6,732	2,853,252	343	424
1892	8,204	6,783	2,611,732	318	385
1893	7,872	6,503	2,203,480	280	339
1894	7,077	5,773	2,605,143	368	451
1895	6,777	5,605	2,631,222	388	469

Southern District.—In the Southern District there were in 1895 fifteen collieries under official inspection, giving employment to 1,949 persons, of whom 1,586 were at work underground. These numbers exhibit an increase of 194 persons employed in and about the mines, and of 143 underground workers, as compared with those so engaged in 1894. There was also an increase of 49,439 tons in the production. The total quantity raised in 1892 was 932,873 tons, the largest output known in one year in the district. The next highest figures are those for 1895, when 916,503 tons were raised. An impetus was given to the trade of these collieries through the strike at the Newcastle mines, which caused a large demand for the southern coal.

The history of coal production in this region for the last ten years may be gathered from the following table:—

Year.	Persons employed in and about mines.	Persons employed underground.	Quantity of Coal raised.		
			Total.	Per person employed in and about mines.	Per person employed underground.
	No.	No.	tons.	tons.	tons.
1886	1,298	947	370,830	286	390
1887	1,313	982	376,658	287	383
1888	1,676	1,244	796,806	475	640
1889	2,065	1,598	701,572	339	439
1890	1,959	1,434	597,598	305	417
1891	2,007	1,550	837,873	417	541
1892	1,860	1,469	932,873	502	635
1893	1,851	1,503	884,470	478	588
1894	1,755	1,443	867,064	494	601
1895	1,949	1,586	916,503	470	578

Western District.—In the Western District in 1895 there were 15 collieries registered, giving employment to 296 persons, of whom 247 were at work underground. From the subsequent table, it will be seen that the output in 1891 was in excess of that of any other year during the decade, not even excepting 1888, when the demand for Western coal was larger than usual, owing to the scarcity caused by the strike in the Northern Collieries. The figures for 1895 show a decrease of 9,005 tons compared with those for the previous year, and are lower than in any year since 1885, 1893 alone excepted. The average quantity of coal raised per miner is much greater in the Western collieries than elsewhere in the colony. This is due to a variety of causes, but chiefly to the greater thickness of the seams and the more friable character of the coal, and to the circumstance that the coal-beds are almost horizontal, and generally at small depths; in some cases the coal is worked by means of adits or tunnels instead of shafts, so that the facility for winning coal is much greater in these mines than in those at Newcastle. But though the output is greater per miner than in the other coal regions, the price for hewing is lower, so that the earnings of the individual miner do not differ greatly wherever the mine is situated.

The following table shows the growth of coal production in the Western region during the last ten years. Until 1891 the progress was regular, and in keeping with the advance of settlement in th[illegible] the colony extending from the Blue Mountains to the Darling, in which the Western collieries have a monopoly of the coal trade; but during the last four years the output has decreased. Situated, as these mines are, in close proximity to the principal iron-fields of New South Wales, their future prospects will be greatly improved should the manufacture of iron from the ore become an established industry in this part of the colony:—

Year.	Persons employed in and about mines.	Persons employed underground.	Quantity of Coal raised.		
			Total.	Per person employed in and about mines.	Per person employed underground.
	No.	No.	tons.	tons.	tons.
1886	416	355	281,229	676	792
1887	398	340	302,137	759	888
1888	752	642	339,594	451	529
1889	653	535	329,713	505	616
1890	636	532	343,232	540	645
1891	504	436	346,804	688	795
1892	450	372	236,363	525	635
1893	305	261	190,378	624	729
1894	299	245	199,869	668	816
1895	296	247	190,864	645	773

There were 10 persons killed and 47 injured in the New South Wales coal-mines during 1895, making a total of 57 persons affected by accidents—the number of cases terminating fatally being smaller than in any of the previous ten years, with the exception of 1892 and 1894, and the non-fatal cases larger than in any year since 1886, with the exception of 1889, 1891, and 1892, when the numbers were 57, 54, and 77 respectively. For the decennial period ending with 1895, the average annual loss of life in the British coal-mines was 1·7 per thousand, or at the rate of 180,217 tons of coal raised for every fatal accident. In the New South Wales collieries, for the same period, the rate was 2·6 fatal accidents per thousand miners employed, and only 136,177 tons of coal were raised for every life lost. This very high average of fatal accidents in the colony results from the Bulli disaster in 1887, when 81 miners lost their lives. The circumstances surrounding the mining industry in New South Wales would warrant the expectation of a much lighter average.

The number of accidents in the coal-mines of the colony, with the proportion of miners to each fatal and non-fatal case, is given herewith, as well as the quantity of coal raised to each life lost :—

Year.	Accidents.		Number of miners employed to each person.		Number of tons of coal raised to each person.	
	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.
1886	43	29	182	270	65,818	97,594
1887	45	94	178	85	64,944	31,092
1888	43	15	216	620	74,500	213,565
1889	57	41	180	251	64,134	89,163
1890	36	13	291	805	85,024	235,452
1891	54	21	200	515	74,776	192,282
1892	77	8	136	1,318	49,103	472,622
1893	45	13	222	771	72,851	252,171
1894	40	7	228	1,304	91,802	524,589
1895	47	10	203	954	79,544	373,859

The following table shows the quantity and value of coal raised in the colony from the earliest record to the close of 1895, the total production being 68,372,749 tons, valued at £30,694,051 :—

Period.	Quantity.	Average per ton.	Value.
	tons.	s. d.	£
Prior to 1830	50,780	10 0	25,394
1830 to 1839	111,069	8 9	50,525
1840 „ 1849	349,961	9 2	155,083
1850 „ 1859	1,481,761	12 11	1,004,924
1860 „ 1869	6,174,132	10 2	2,961,910
1870 „ 1879	12,530,044	10 7	6,838,888
1880	1,466,180	8 5	615,336
1881	1,769,597	6 10	603,248
1882	2,109,282	9 0	948,965
1883	2,521,457	9 6	1,201,942
1884	2,749,109	9 6	1,303,077
1885	2,878,863	9 4	1,340,213
1886	2,830,175	9 2	1,303,164
1887	2,922,497	9 3	1,346,440
1888	3,203,444	9 1	1,455,198
1889	3,655,632	8 11	1,632,849
1890	3,060,876	8 4	1,279,089
1891	4,037,929	8 8	1,742,796
1892	3,780,968	7 9	1,462,385
1893	3,278,328	7 2	1,171,722
1894	3,672,076	6 4	1,155,573
1895	3,738,589	5 10	1,095,327
Total	68,372,749	8 11	30,694,051

This table shows that coal, like other articles of commerce, is subject to fluctuations in price. These fluctuations have to a large extent arisen in the past from uncertainty in the markets. This uncertainty no longer exists, for the local markets and those of the other Australian colonies demand a large share of the coal raised. The proportion of the production taken by Australasia increases almost every year, and operates in the direction of steadying the price, by removing the principal cause of fluctuation. The highest average price obtained during any year was in 1854, the first of the Crimean war, and the third after the commencement of the gold rush, when the price per ton was not less than 20s. 6d. In 1872 the output reached 1,000,000 tons; ten years later it had increased to 2,000,000; and in 1891, to a little over 4,000,000 tons; while for the last four years it fluctuated between three and a quarter and three and three-quarter million tons.

The colony was its own chief customer during 1895, when out of the total production stated above the local consumption amounted to 1,572,359 tons, or over 42 per cent. Victoria was its principal customer abroad, taking 742,316 tons, or over 34 per cent. of a total export of 2,166,230 tons. The quantity of coal required for local consumption denotes a satisfactory increase during most years, as the following statement shows :—

Year.	Tons.	Year.	Tons.
1886	1,094,310	1891	1,523,561
1887	1,132,055	1892	1,589,263
1888	1,279,572	1893	1,443,238
1889	1,267,930	1894	1,546,951
1890	1,239,002	1895	1,572,359

The annual consumption per head increased from 16 cwt. in 1877 to 25 cwt. in 1895. The larger use of steam for railway locomotives, and for manufacturing and other purposes, as well as the multiplication of gasworks, accounts for a great portion of the increase; but it must also be borne in mind that there is a large and growing demand for bunker coal for ocean-going steamers, which appears not as an export, but as required for home consumption. The amount of coal taken by the steamers during 1895 was little short of 300,000 tons.

The quantity of coal supplied to the customers of the colony abroad shows also a large increase during this period :—

Year.	Tons.	Year.	Tons.
1886	1,735,865	1891	2,514,368
1887	1,790,442	1892	2,191,705
1888	1,923,872	1893	1,835,090
1889	2,387,702	1894	2,125,125
1890	1,821,874	1895	2,166,230

As the coal trade of 1890 was hampered by the strike of that year, the exports of 1891 necessarily showed a large advance over those of 1890; still, even if compared with the year 1889, the trade of 1891 exhibited satisfactory progress, while in 1892 the exports fell not only below those of 1891, but even below those of 1889. A further large decrease in the exports took place in 1893, but the figures for 1894 and 1895 show a slight recovery, although they are below those of 1889, 1891, and 1892.

The customers of New South Wales for coal during the year 1895 will be found in the following table, from which it will be seen how wide is the circle which relies upon the colony for the supply of one of the chief necessaries of civilised life:—

Country or Port.	Tons.	Country or Port.	Tons.
Victoria	742,316	Panama	18,812
Chili	308,530	Mexico	15,271
United States	284,793	China	15,079
New Zealand	159,407	New Caledonia	13,661
South Australia	153,258	Mauritius	11,961
Tasmania	62,050	South Sea Islands	10,406
Western Australia	53,555	United Kingdom	3,400
Philippine Islands	48,564	Ceylon	2,986
Hawaiian Islands	44,436	Canada	2,500
India	43,651	Ecuador	972
Straits Settlements	41,366	Kaiser Wilhelm's Land	793
Hong Kong	32,801	New Guinea	105
Peru	27,225	Marshall Islands	100
Queensland	25,918	New Britain	72
Java	23,364		
Fiji	18,878	Total	2,166,230

The wealth of the colony in coal is enormous, and the further expansion of the industry may be regarded as almost a certainty. As the great Australian Continent is only in the early period of the development of its immense resources, so also may the coal-mining industry of New South Wales be said to be in its infancy. It is, however, a very vigorous infancy, giving promise of a great future.

New South Wales coal, especially that obtained in the northern mines, compares favourably as a heat producer with the best foreign coal. It has the advantage of a greater specific gravity, and it contains less sulphur. The result of analyses made of coals from various localities in the colony showed that the mean specific gravity of the Northern District coals was 1·300; of the Western coals, 1·346; and of the Southern coals, 1·394; while the mean of a number of samples of British coal was 1·279. Carbon was present to the extent of 79·28 per cent. in the Northern, 70·75 per cent. in the Western, and 79·40 per cent. in the Southern coal, the proportion in the British coal being 80·40 per cent. The proportion of hydrogen, oxygen, and nitrogen is very much the same in the Australian as in the British coal, but the latter has a slightly smaller percentage of ash. The steam-producing power of the coal from the Northern districts of the colony is almost equal to, and that from the South and West a little below, the generating power of the coal raised in Great Britain.

COKE.

The quantities of coke manufactured in New South Wales during the last six years were as follow :—

1890	31,097 tons,	valued at	£41,147
1891	30,310 „	„	£34,473
1892	7,899 „	„	£8,853
1893	17,858 „	„	£20,233
1894	34,458 „	„	£33,209
1895	27,630 „	„	£24,683

During the same period the imports into the colony were :—

1890	38,174 tons
1891	76,542 „
1892	61,852 „
1893	61,874 „
1894	47,586 „
1895	42,526 „

Almost the whole of this was imported *via* South Australia to the Barrier district, where it was used for smelting purposes. The returns of the South Australian Customs Department show that by far the largest quantities of this coke came originally from the United Kingdom and from Germany. At Broken Hill, the Proprietary Company alone have consumed about 1,000 tons per week. It seems a singular circumstance that the silver-miners of New South Wales should so largely rely on England and Germany for their coke when the colony possesses unlimited supplies of coal from which excellent coke can be manufactured. It is true that complaints have been heard that the colonial coke contains a higher percentage of ash than the imported coke, and that it is too friable, causing a large percentage of loss through abrasion in transport, while the coke, it has been said, arrives in such small pieces as to be unfit for smelting the fine lead ores. A few years ago, however, Mr. Pittman, in a report upon this subject, brought figures to prove that much of the foreign coke used by the Broken Hill Proprietary Company contained a greater percentage of ash than some of the colonial-made cokes; also that the strength—or capacity for resisting breakage—of the colonial cokes was greater—in some instances much greater—than that of the imported coke.

At the old Bulli mine a coal seam 6 feet thick has been for about half that thickness transformed into a sort of natural coke, apparently through the intrusion of igneous matter underneath the seam. This natural coke is largely used on the Sydney tram-motors.

Of the quantities of coke manufactured during the last six years in New South Wales, there were produced from the Northern mines 15,886 tons in 1890, 9,474 tons in 1891, 5,245 tons in 1892, 12,262 tons in 1893, 13,602 tons in 1894, and 11,326 tons in 1895; while the Southern mines produced 15,211 tons in 1890, 20,836 tons in 1891, 2,654 tons in 1892, 5,596 tons in 1893, 20,856 tons in 1894, and 16,304 tons in 1895.

KEROSENE SHALE.

This mineral is found in various parts of the colony, but principally at Hartley, Katoomba, Megalong, Bathgate, near Wallerawang, Joadja Creek, Berrima, Mount Kembla, Burragorang, and Greta; and also at Colley Creek, near Murrurundi, in the Capertee district, and in the valley of the Wolgan River. The shale occurs in saucer-shaped deposits, varying in thickness from a few inches to 6 feet. It is a species of cannel-coal, similar to the Boghead mineral of Scotland, but yielding a much larger percentage of volatile hydro-carbon than the Scotch mineral. The richest quality yields about 100 to 130 gallons of crude oil per ton, or 17,000 to 18,000 cubic feet of gas, with an illuminating power of thirty-five to forty sperm candles when gas only is extracted from the shale. The specific gravity of the best Joadja Creek and Hartley shale is 1·06, the amount of sulphur 0·49 per cent., and the yield of tar 40 gallons per ton. It is found advantageous for mixing with ordinary coal for the manufacture of gas, and is largely exported to Great Britain, America, and other foreign countries, as well as to the neighbouring Colonies, for gas purposes. On analysis the following result was obtained from average specimens:—

Volatile Hydro-carbons, including moisture	82·50	per cent.
Fixed Carbon	6·50	,,
Ash	11·00	,,

At present four companies are working kerosene shale in the colony, their mines being situated at Hartley Vale, Genowlan, Ruined Castle, and Nellie's Glen, in the Western District; and at Joadja, in the Southern district. Only two, however—the New South Wales Shale and Oil Company, at Hartley, and the Australian Kerosene Oil and Mineral Company, at Joadja Creek and Katoomba—prosecute the industry vigorously, these companies not only raising shale for export, but also manufacturing from it petroleum oil and other products. The production of kerosene shale from the opening of the

the end of 1895 amounts to 863,495 tons, of the value of £1,761,011, as shown in the following table:—

Year.	Quantity.	Average price per ton.	Total value.	Year.	Quantity.	Average price per ton.	Total value.
	tons.	£ s. d.	£		tons.	£ s. d.	£
1865–67	7,419	3 9 5	25,749	1889	40,561	1 18 3	77,667
1868–72	58,772	2 13 9	157,886	1890	56,010	1 17 2	104,103
1873–77	71,108	2 12 9	187,793	1891	40,349	1 18 9	78,160
1878–82	152,050	1 18 8	293,727	1892	74,197	1 16 8	136,079
1883	49,250	1 16 11	90,861	1893	55,660	1 16 4	101,220
1884	31,618	2 5 8	72,176	1894	21,171	1 10 0	31,781
1885	27,462	2 9 0	67,239	1895	59,426	1 5 4	75,219
1886	43,563	2 5 11	99,976				
1887	40,010	2 3 10	87,761	Total ...	863,495	2 0 9	1,761,009
1888	34,869	2 2 3	73,612				

The features of this table are the steady fall in the average price of the mineral and the fluctuating production. There is no special reason for the rise and fall in the quantity of shale produced from year to year beyond the irregularity in the orders coming forward for export, and the slackening of mining operations while the mineral at grass is being reduced. It does not necessarily follow, either, that the whole production of any one year is put to actual use. A certain proportion of second-grade mineral must be taken out with the first quality, and as there is only an outside demand for the higher grade, it depends altogether upon their ability to compete with the imported oil whether the local companies make use of the second quality at all. The number of miners employed in the shale mines of the colony in 1895 was 246 under ground and 108 above ground, or a total of 354.

DIAMONDS AND OTHER GEM-STONES.

The existence of diamonds and other gem-stones in the territory of New South Wales has been known for many years, but no attempt was made to work the deposits until the year 1872. In the course of the following year several deposits of diamantiferous wash were discovered in the country near Inverell, in the New England district. The number of diamonds found in the colony to the end of 1895 is estimated at 106,000, the largest being one of 5⅝ carats, or 16·2 grains. The diamonds occur in old tertiary river drifts, and in the more recent drifts derived from them. The deposits, which occur in the Inverell, Bingara, Mittagong, Cudgegong, and Narrabri districts, are extensive, and have not yet been thoroughly prospected. The best of the New South Wales diamonds are harder and much whiter than the South African diamonds, and are classified as on a par with the best Brazilian gems. During the year 1889 the Malacca Company, near Tingha, found diamonds weighing 2,195⅝ carats, valued at £878 5s. In 1891 no less than 12,000 carats of diamonds were won in the Tingha and Inverell districts, but no value is given. In 1892 as many as 2,250 diamonds were obtained from the Monte Christo Mine at Bingara alone. The majority of diamonds obtained in this district weigh from ⅛ to ⅕ carat, while the largest vary from 2 to 3 carats. In 1894 the only work done was prospecting in the Bingara, Mittagong and Denison Town districts; and in 1895 the industry was still quiet, but at Boggy Camp Diamond Field, 16 miles west of Tingha, a revival took place during the year, and 4,100 stones, weighing in the aggregate 1,313 carats, and valued at £400, were obtained. The total output of the Bingara district to the end of 1893 is said to have been about 150,000 carats, valued at £15,375.

Other gem-stones, including the sapphire, emerald, oriental emerald, ruby, opal, amethyst, garnet, chrysolite, topaz, cairngorm, onyx, zircon, etc., have been found in the gold and tin-bearing drifts and river gravels in numerous localities throughout the colony. The Emerald Proprietary Company, in the Emmaville district, have sunk two shafts, 100 ft. and 50 ft. respectively; and 25,000 carats have been won in a rough state. Their value when cut and finished, if of the best quality, is about £2 per carat. Owing to the difficulties of extraction, and the low price of the gems in the London market, the mines have been closed for two years.

The finest opal known is obtained in the Upper Cretaceous formation at White Cliffs, near Wilcannia, and at these mines over 300 men find constant employment. During the year 1895 good stone was found at a depth of 50 feet, and as the lower levels are reached the patches of opal appear to improve in quality and to become more regular and frequent. On block 7 a patch of stone was found which realised over £3,000. It is difficult to state with exactitude the value of the production, but it is believed that stone to the value of £23,000 has been sold during the last three years. The quality of the stone found on the fields varies considerably, some only realising 10s. per oz., while the best quality occasionally realises as much as £42 per oz. The best market for the gems is Germany, and they find a ready sale.

Topazes are obtained largely at Oban, in the Glen Innes division; but the price obtained is very low, and only one sale, to the amount of £20, is reported during the year. Turquoises have been discovered at Mount Lorigan, near Wagonga, and work was carried on during the year 1895 by means of aid granted from the prospecting vote.

MICA.

Mica is known to exist in many parts of New South Wales, but has never yet been worked, although there is a considerable demand for the article, especially if in blocks of fairly large size that could easily be split into thin plates. It is to be met with in the numerous granitic areas that occur in various parts of the colony, especially in the coarsely-crystalline granitic formations in the Silverton district, and elsewhere in the Barrier Ranges.

ASBESTOS.

Asbestos has been found in veins in serpentine in the Gundagai, Bathurst, and Barrier Range districts—in the last-named in considerable quantities.

ALUNITE.

Alunite occurs as a large deposit at Bulladelah, about 35 miles from Port Stephens, the yield averaging about 80 per cent. of alum. During 1895, 832 tons of alunite, valued at £3,328, were shipped to England, where it is found that the stone can be treated more cheaply than is possible locally, and in consequence the company's works at Bulladelah are closed.

MARBLE, BUILDING STONES, FIRE-CLAYS, AND SLATES.

The colony possesses a most abundant supply of all the various kinds of stone and other materials for the building and adornment of its cities. Marble limestone is found in great masses near Wallerawang, Bathurst, Molong, Marulan, Tamworth, and Kempsey, localities which are all within convenient distance of the great arteries of communication; and it is obtainable in all its different varieties. Marble quarries have been opened at Cow Flat, Marulan, Wallerawang, Orange, and Tamworth; but only those of Cow Flat and Marulan are being worked. Granite is found near Goulburn, Moruya, Trial Bay, and on Montagu Island, as well as at many other places throughout the colony. Most of the granite hitherto used in Sydney has been obtained from Moruya, a port about 180 miles south of Sydney.

Limestone flux is supplied to the Broken Hill silver-mines from quarries at Tarrawingie, which are connected with the mines by a tramway, 30 miles in length. The quantity so supplied during 1891 was 74,057 tons, valued at £65,357; during 1892, 103,368 tons, valued at £93,031; during 1893, 130,635 tons, valued at £111,041; during 1894, 89,990 tons, valued at £69,290; and during 1895, 104,194 tons, valued at £68,160. A company forwarded large quantities of limestone from Myall Lake to Sydney in 1892, and commenced the manufacture of hydraulic lime; but owing to the lack of a market for the product the operations were discontinued.

The Hawkesbury formation, over which the City of Sydney is built, provides the city with an inexhaustible supply of sandstone, of the highest quality for building purposes. This material is admirably adapted for architectural effect, being of a pleasant colour, fine grain, and very easily worked. The beauty of Sydney street architecture is due in no inconsiderable degree to the free use of this excellent sandstone.

Basalt or bluestone, which is extensively used as road metal and for the ballasting of the railway lines, is obtained at Kiama, Prospect, Pennant Hills, and Bowral. This stone has not yet been used to any extent for building purposes.

Syenite, a stone even harder than bluestone, is found at Bowral and other places; as a building material it is equal to granite in solidity, and, like granite, it takes a beautiful polish. The success which has attended its first use as a building stone, together with the short distance from the metropolis at which it is to be found, will no doubt cause it to be extensively used in the future for large structures.

Kaolin is being worked at Tichbourne, near Parkes. The clay is of excellent quality, and superior to the best obtained in England or France.

The coal measures also contain numerous beds of fire-clays; and in every part of the colony excellent clays, well adapted for brick-making purposes, are extensively worked. Slates are found in several districts, but are principally quarried at Gundagai and in the surrounding district, as well as at Bathurst and Goulburn. It will be seen, therefore, that the colony has no need to import building material of any description, as it possesses a supply amply sufficient to provide for its own wants and those of its neighbours.

Graphite has been obtained at Undercliff, in the New England district, from a lode 6 ft. wide. It is of inferior quality.

PROSPECTING VOTE.

Following the practice of the neighbouring colony of Victoria, the Government has for some years past devoted a sum annually to encouraging prospecting for gold, and in 1889 the conditions of the vote were so amended as to embrace all minerals. The amount set apart annually is £20,000; but for the year 1892 it was fixed at twice that sum. With the exception of the Mount Drysdale gold-field, which was discovered in 1892, it cannot be claimed that any discovery of a large payable field has so far been made by means of the prospecting vote, but at the same time it may be said that some rich working claims have been opened up with the aid granted. Also, in addition to the employment of labour, the proving of a lode or reef to be payable invariably leads to the taking up of large areas of adjoining land under the Mining Act, from which increased revenue is derived by the State. From the year 1888 to the end of November, 1896, the number of such discoveries reported to the Department of Mines was 173, while the amount expended in prospecting work during that time was £170,480.

Miners desiring a grant from the vote have to satisfy the Prospecting Board that the locality proposed to be prospected is one likely to yield the mineral sought for, and that the mode of operations is suitable for its discovery. Aid is given in deserving cases up to 50 per cent. of the value of the work done and of the necessary implements and materials. Miners who have been assisted from the vote are [illegible] any reward that may be offered for the discov [illegible] mineral fields.

DIAMOND DRILLS.

The use of the diamond drill in searching for minerals dates only from 1881, and boring by the Department of Mines commenced much later. The drills now in use belong for the most part to the State, and are lent to private persons on terms fixed by regulation, the charges being £2 2s. on application, towards cost of inspection; £10 per week for cost of diamonds and wear and tear of machinery from start of bore till completion; wages of engineer and assistants; cost of tubes damaged, destroyed, or which cannot be withdrawn from bores; all charges for freight, etc., on machinery, both on being sent and returned; and cost of all fuel and water necessary for working the drill. An abatement is, however, granted by the Mines Department in special cases. Arrangements may also be made for the work to be done at a fixed price per foot for various depths.

During the year 1895 the depth bored was 299 feet, the receipts being £163, while the expense to the Mines Department was £453, of which amount £228 represents the actual working expenses. In this last sum is not included the wear and tear of the drills and machinery employed. The following statement shows the total depth bored during 1895 in the only locality where operations were carried on during that year, together with the average sinking per hour and the cost per foot, an ore containing gold, silver, copper, and lead being the mineral sought for:—

Locality.	Strata.	Total depth bored during 1895.	Rate bored per hour.	Cost per foot.	Mineral for which bored.
		ft. in.	inches.	£ s. d.	
Captain's Flat..	Porphyry.....	299 0	9·34	1 10 3⅞	Gold, silver, copper, and lead.

The working cost exclusive of office expenses, etc., was 15s. 2¾d. per foot.

Owing principally to the financial depression, the use of the diamond drill has considerably fallen off, the depth bored during 1894 having been 557 feet; during 1893, 1,903 feet; during 1892, 4,139 feet; and during 1891, 7,797 feet. New regulations, under which the use of the diamond drill can be made available at an almost nominal cost in basaltic or other mineral country which has not been prospected, and which is either too hard, wet, or deep, and, therefore, too expensive for sinking, have been published since the end of 1895, and it is expected that these will lead to a large increase in the use of drills.

LAND LEGISLATION AND ADMINISTRATION.

THE systems adopted for the settlement of population on the lands of New South Wales have been many, and they have differed widely at various stages of the colony's progress. In the early days of colonization the Governor had the sole power of granting lands, which he did under prescribed conditions, such as the payment of an annual quit-rent, the cultivation of a certain proportion of the area granted, and other services specified in instructions received from time to time from the Secretary of State. The first instructions issued to Governor Phillip, on the 25th April, 1787, authorized him to make grants only to emancipated prisoners, in the following terms:—"To every male shall be granted 30 acres of land, and in case he shall be married, 20 acres more; and for every child who may be with them at the time of making the said grant, a further quantity of 10 acres, free of all fees, taxes, quit-rents, and other acknowledgments for the space of ten years." The annual quit-rent to be paid on these grants was afterwards fixed at 6d. for 30 acres. The first settler was a prisoner of the name of James Ruse, who, having completed his sentence, entered on his farm of 30 acres at Parramatta on the 25th February, 1789.

Additional instructions were issued by the Secretary of State on 20th August, 1789, extending the privilege of obtaining grants to such of the non-commissioned officers and men of the detachment of marines serving in New South Wales as were desirous of remaining in the territory after obtaining their discharge. The Governor was further requested to facilitate the settlement of free persons who might be disposed to emigrate with the view of becoming settlers in the colony, by giving them grants of land not exceeding the maximum area granted to non-commissioned officers, viz., 100 acres, subject to the same quit-rent, the annual amount of which was 1s. for every fifty acres, payable at the expiration of five years after the issue of a grant. In the original instructions no mention was made of grants to officers, but this omission was afterwards rectified. These early grants were made on condition that a certain proportion of the land should be cultivated, but although this condition was not always complied with, no grants were ever cancelled in consequence. As to the payment of quit-rents, Mr. Commissioner Bigge, in his report on the administration o
Macquarie, states that from 1809 to 1823 no o

With regard to settlement in the town of Sydney, grants were not made until the year 1811, when the necessary authority to do so was given in a letter from the Secretary of State, dated the 26th July, and allotments were granted on lease only for periods of fourteen or twenty-one years. Previous to the building regulations issued by Governor Macquarie on the 18th August, 1810, no attention was paid to the regular admeasurement of town allotments or to the formation of streets.

Quit-rents on leases and grants of town allotments varied in amount according to the Governor at whose discretion they were imposed. Leases of fourteen and twenty-one years were subject to annual quit-rents of 2s. 6d., 5s., 10s., and 20s. each; and from 1811 to 1814 grants of town allotments were charged at the rate of 2s. 6d. per rod per annum; but on the 21st March, 1814, the following scale of quit-rents for town allotments was established by Governor Macquarie :—

Gradation.	Leases.		Grants.	
	Sydney.	Other Towns.	Sydney.	Other Towns.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Maximum	2 0 0	1 0 0	3 0 0	2 0 0
Minimum	0 10 0	0 10 0	1 0 0	0 3 4
Above 20 rods, per additional rod, but not exceeding the maximum..	0 0 2	0 0 1	0 0 4	0 0 3

The method of disposing of Crown lands, and the scale of quit-rents chargeable, suffered no alteration until the issue of the Government and General Order of the 5th November, 1823. By this order the terms upon which lands could be obtained in New South Wales were modified, the annual quit-rent being raised to 3s. for every 20 acres, payable immediately if the lands had been obtained as an additional grant, but if otherwise at the commencement of the sixth year.

Though a certain limit appears to have been fixed as to the area of grants, the early Governors often overstepped their instructions in this direction. Governor Macquarie, in particular, was deemed to have disposed of the Crown lands in too liberal a fashion, and the result of an investigation into his administration led the British Government to issue to his successors instructions of a more definite and stringent character with regard to the alienation of Crown lands.

The instructions to Sir Thomas Brisbane introduced the principle of alienation of lands by sale to free settlers who arrived in the colony with a certain amount of available capital, and the grants were made on condition that a certain proportion of the land should be cultivated, or improvements of corresponding value erected thereon, and a given number of convicts maintained free of expense to the Government. On the 8th November, 1824, it was further proclaimed that a grant of 100 acres would be given to any settler for every convict maintained by him free of expense to the Government; but applications for grants under this condition became so frequent that the order was rescinded on the 16th March, 1826. By a Government and General Order, dated the 24th March, 1825, land was allowed to be sold by private tender at a minimum price of 5s. per acre. The order notified that the Governor would receive applications for the sale of waste lands; but no person was permitted to purchase more than 4,000 acres, nor any family more than 5,000 acres. The price of unlocated Crown lands in the county of Cumberland, or of any of the lands situated on the west of the Nepean River, was raised to a rate ranging from 7s. 6d. to 10s. per acre. The disposal of lands by sale did not, however, interfere with the ordinary method of alienating town allotments and country lands by grants subject to the payment of quit-rents.

The progress of settlement, and the extension of the pastoral industry (which was already taking place) rendered it necessary that some classification of lands should be made in accordance with natural adaptability to the various purposes of colonization. On the 18th May, 1825, instructions were received from the Secretary of State, directing that the colony should be divided into counties, hundreds, and parishes, and that a valuation should be made of the lands throughout the territory, with a view of fixing an average price at which all the disposable lands should be put up for sale. The grants made thereafter, within the limits in which settlement was allowed, were subject to the payment of a quit-rent of 15s. for every 100 acres, redeemable at twenty years' purchase. Three Land Commissioners (of whom Sir Thomas Mitchell, the Surveyor-General, was President) were appointed on the 10th January, 1826, to give effect to these instructions. The Commissioners completed their labours in about three years, and divided the territory into nineteen counties, covering some 34,505 square miles, or 22,083,200 acres of land. During this period certain modifications were introduced; the sale of land was suspended, and the quit-rents charged on grants were altered to a rate of 5 per cent. per annum on the value fixed by the Commissioners, whilst on grants in extension of previous grants, and on lands reserved to settlers for their choice of purchase, a charge was made at the rate of 20s. per 100 acres. On the 28th August, 1828, the quit-rent on primary grants was altered to an annual sum of 2d. per acre, and this rate remained in force until grants were abolished except for public purposes, and the principle of sale by public auction, in lieu of private tender, was made the sole means of alienating Crown lands. The Land Commission was abolished on the 6th May, 1830.

Great difficulty has been experienced in determining the area granted and sold by private tender from the date of the first settlement to the year 1831, when the system of land alienation by auction sale was introduced; but it has been ascertained from authentic sources that the following areas were disposed of as under:—

	Acres.
Area granted by Governors up to 1810	177,500
do Governor Macquarie, 1810–23	400,000
Area granted and sold, 1824–31	3,386,250
Total	3,963,750

From this total, however, there should be deducted 57,423 acres of land granted in Van Diemen's Land, reducing to 3,906,327 acres the area granted and sold within the present limits of New South Wales.

The system of granting land upon the payment of an annual quit-rent was at all times subject to many difficulties, and the collection of these dues appears to have been carried out in a very perfunctory manner. These difficulties led the Government in later years to offer special inducements for the redemption of quit-rents. On the 9th October, 1846, the following notice was proclaimed:—"All lands for which twenty years' quit-rent has been paid shall be free from further charge, and any persons who have paid more than twenty years' quit-rent shall have the difference refunded to them." On the 30th July, 1849, it was further notified that at any time thenceforward any person might redeem his future quit-rent by an equivalent cash payment. Finally, a Government notice of the 13th May, 1851, directed that all quit-rents of a higher annual rental than 2s. for every 100 acres would be reduced to that uniform rate at the expiration of the year 1851; and also that the quit-rents on allotments in country towns would be reduced to one-fourth of the rate fixed in the deeds of grant, with the power of redemption at twenty years' purchase.

With regard to allotments in Sydney and other large towns, which were either granted or leased under the regulations established by Governor Macquarie, the rates levied by him in 1814 were first altered by Sir Thomas Brisbane as follow:—

On leases for twenty-one years	6d. per rod.
On town grants	9d. „

A Government order, dated the 29th March, 1829, established the following regulations:—"Upon the approval of applications for town allotments a grant of the *fee simple* will be given, it being the intention of the Government not to issue leases in the future. The rates of annual quit-rents in the several classes of towns shall be as follow:—

1. Sydney	6d. per sq. perch.
2. Seaport towns	5d. „
3. Towns at the head of navigable rivers	4d. „
4. Inland towns	2d. „

The said quit-rents shall be unredeemable for ever, but they shall not commence until seven years after the date of authority to take possession, except in the towns of Parramatta and Windsor." Leases were, however, re-established by a Government notice of the 25th August, 1834, by which allotments were allowed to be leased in the country towns only, with covenant to convert the same into grants either upon payment of twenty-one years' quit-rent or upon the erection of buildings to the value of £1,000.

INTRODUCTION OF LAND SALES.

The alienation of land to settlers by grant was abolished by Viscount Goderich, Secretary of State for the Colonies. Under the Government and General Order dated the 14th February, 1831, it was notified that no Crown lands were to be disposed of otherwise than by public competition, the minimum price being fixed at 5s. per acre. Settlers were allowed to select within the settled districts only, and the land thus selected was submitted to auction and sold to the highest bidder, the *selector* being generally the purchaser. In 1839 the upset price was raised to 12s. per acre, and the practice was introduced of varying this minimum according to the presumed value of the land, making it, as a general rule, from 10 to 20 per cent. less than the price of the last land sold of the same quality, and in the same locality. In the Port Phillip district, land was only brought to sale at the discretion of the Governor.

Until the year 1841 regulations for the sale of land were issued by the Secretary of State; but on the 21st August of that year additional instructions were forwarded to Sir George Gipps, stating that in future it should be competent for the Governor, with the advice of the Executive Council, to revoke the order in force, and to substitute regulations passed by the Colonial Government with regard to the disposal of public lands.

Although grants had been virtually abolished in 1831, a certain quantity of land was still being conveyed to settlers in virtue of promises made by former Governors. The following figures show the area of land granted and sold during the period 1832–1840 :—

Year.	Area granted.	Area sold.	Year.	Area granted.	Area sold.
	acres.	acres.		acres.	acres.
1832	15,843	20,860	1837	6,090	370,288
1833	14,639	29,001	1838	63,160	277,466
1834	27,861	91,400	1839	16,832	234,272
1835	5,271	271,947	1840	5,243	105,900
1836	16,132	389,546			

In addition to the above, there were sold in the district of Port Phillip, or the Southern District, in—

1837	88 acres.
1838	38,694 ,,
1839	38,347 ,,
1840	83,888 ,,

A new division of the territory had been made under the Land Regulations issued by the Governor and Executive Council on the 21st June, 1841, the Northern District including the country around Moreton Bay; the Middle District, the nineteen settled counties; and the Southern District, the Port Phillip settlement and Gippsland. In the Middle and Northern Districts the upset price was maintained at 12s. per acre, but it was raised to 20s. per acre in the Port Phillip District. These Regulations were again superseded by an Act of the Imperial Parliament, entitled "An Act for regulating the sale of waste lands belonging to the Crown in the Australian colonies," which came into force on the 22nd June, 1842. Under this Act the principle of sale at auction was maintained, but the lands applied for were to be surveyed before being put up at quarterly sale, the upset price being fixed at 20s. per acre, payable forthwith. Blocks of unsurveyed land, containing 20,000 acres or more, could, however, be sold in one lot by private contract at not less than the minimum price.

Under the Imperial Act of the 9th March, 1847, amending the above, a new classification of lands took place, and the territory was again divided into—first, settled districts, including the nineteen counties, and the lands in the counties of Stanley and Port Phillip immediately surrounding the settlements at Moreton Bay and Melbourne respectively; second, intermediate districts, comprising a belt of land from 50 to 200 miles inland beyond the boundaries of the settled districts, and in which pastoral occupation had already spread; and, third, unsettled districts, extending westward to the extreme limits of the colony. This amending Act did not affect the disposal of Crown lands by public auction or private contract, but it introduced a system of leasing the lands for pastoral purposes, for various terms, in each of the three divisions. During the currency of a lease the land was saleable only to the lessee, and after the expiration of the term the lessee was also allowed a pre-emptive right over all or any part of the land at the upset price of £1 per acre. The legislation of 1847 remained in force in New South Wales, as regards the disposal of public lands by auction sale at £1 per acre, until the year 1861; and in the colonies of Victoria and Queensland, which were separated from the mother colony in 1851 and 1859 respectively, until repealed by Acts of the local Parliaments. The following table shows the area of land sold and granted in New South Wales from the year 1841 to 1861 inclusive under the regulations above described:—

Year.	Area granted.	Area sold.	Year.	Area granted.	Area sold.
	acres.	acres.		acres.	acres.
1841	18	31,275	1852	57	25,812
1842	15	5,713	1853	612	65,870
1843	7	4,037	1854	2,085	78,221
1844	28	3,701	1855	297	122,667
1845	34	3,763	1856	227	163,952
1846	64	3,036	1857	85	137,867
1847	834	2,602	1858	444	123,548
1848	112	3,232	1859	518	155,171
1849	861	7,341	1860	459	189,937
1850	548	12,191	1861	193	109,217
1851	103	21,747			

From 1841 to 1851 there were also granted and sold in the Port Phillip District the following areas :—

Year.	Area granted.	Area sold.	Year.	Area granted.	Area sold.
	acres.	acres.		acres.	acres.
1841	......	61,197	1846	6	4,578
1842	4	27	1847	17	26,073
1843	3	831	1848	2	18,007
1844	......	181	1849	46	28,091
1845	......	3,685	1850	108	40,043

In the District of Moreton Bay the following areas were sold and granted from its first settlement in 1842 to its separation in 1859 :—

Year.	Area granted.	Area sold.	Year.	Area granted.	Area sold.
	acres.	acres.		acres.	acres.
1842	2	11	1851	5	2,282
1843	16	360	1852	105	739
1844	5	378	1853	70	7,805
1845	1	299	1854	......	5,175
1846	......	70	1855	......	5,285
1847	......	51	1856	195	3,802
1848	2	240	1857	8	7,235
1849	8	825	1858	9	14,063
1850	4	249	1859	......	11,620

Thus, from the foundation of the colony to the inauguration of the legislation of 1861, public lands, both in the mother colony and in the territories administered from Sydney, had been disposed of as follows :—

Period.	In New South Wales proper.	In Van Diemen's Land.	In Port Phillip District.	In Moreton Bay District.
	acres.	acres.	acres.	acres.
From 1787 to 1823	520,077	57,423	....	......
From 1824 to 1836	4,268,750	....	....	......
From the first settlement in Port Phillip in 1837 to 1841	1,110,544	....	222,214	......
From the first settlement in Moreton Bay in 1842 to the separation of Port Phillip in 1850	48,119	....	121,702	2,521
From 1851 to the separation of Moreton Bay in 1859	899,283	....	....	58,398
During 1860–61	299,806	....	....	......
Total from 1787 to 1861 inclusive ...	7,146,579	57,423	343,916	60,919

As regards the area granted and sold in New South Wales proper, under the various systems described in the preceding pages, the 7,146,579 acres disposed of from the first day of the occupation of the territory to the end of the year 1861 were alienated as follow :—

		Acres.
1.	By grants and sales by private tender to close of 1831	3,906,327
2.	,, ,, in virtue of promises of early Governors made prior to 1831, from 1832–40 inclusive	171,071
3.	,, sales at auction, at 5s., 7s. 6d., and 10s. per acre, from 1832–38 inclusive	1,450,508
4.	,, ,, ,, ,, 12s. and over per acre, at Governor's discretion, from 1839–41 inclusive	371,447
5	, ,, ,, 20s. per acre, from 1842–46 inclusive	20,250
6.	,, ,, ,, and by purchases in virtue of pre-emptive rights, from 1847–61 inclusive	1,219,375
7.	,, grants for public purposes, and for grants in virtue of promise of Governor made prior to the year 1831, and grants in exchange for lands resumed from 1841-61 inclusive	7,601
	Total alienated on 31st December, 1861	7,146,579

In dealing with the constitution of rural property in the colony, it is necessary to mention that, in addition to the modes of alienation of the public lands already described, certain grants were made under special enactments. Instructions issued to Sir Thomas Brisbane directed the Governor to reserve one-seventh of the Crown lands in each county for the purpose of church and school establishments, but these instructions do not seem to have been fully carried out, as the reservations did not amount to anything like the proportional area specified. These reserves were as follow :—County of Bathurst, 136,157 acres; Camden, 11,428 acres; Cumberland, 28,081 acres; Cook, 100 acres; Durham, 29,453 acres ; Gloucester, 176,091 acres; Hunter, 2,314 acres; Northumberland, 15,362 acres; Roxburgh, 1,000 acres ; and St. Vincent, 43,500 acres ; making a total area of 443,486 acres. These lands were administered by the Clergy and School Lands Corporation until the abolition of that body by Order of Council of the 4th February, 1833, whereupon all lands vested in the same reverted to the Crown, and an agent was appointed to determine the claims of purchasers, to whom deeds of grant were made, the said lands being secured to them by a subsequent Act of Council dated the 5th August, 1834. Of the area mentioned above, 161,182 acres were alienated up to the year 1880, when by the Church and School Lands Dedication Act of that year, the balance of 282,304 acres came under the control of that Department to be administered for the purposes of Public Instruction. The unsold Church and School Lands thus transferred are situated as follow:—In the County of Gloucester, 172,297 acres; Bathurst, 83,649 acres; St. Vincent, 18,229 acres; Cumberland, 3,973 acres; Durham, 3,361 acres; Northumberland, 744 acres; Hunter, 48 acres; and Camden, 3 acres.

The Australian Agricultural Company was incorporated by an Act of the Imperial Parliament, dated the 21st June, 1824, and a promise of a grant of 1,000,000 acres made to this Company was fulfilled in the following year. Originally a grant containing 1,048,960 acres was selected in the country surrounding Port Stephens, but in 1832 the Company was authorised to exchange a portion of this grant, containing 600,000 acres, for two allotments situated on the Peel River and on the Liverpool Plains. These three grants contain, according to the latest surveys, the following areas:—

	Acres.
Port Stephens Estate, county of Gloucester	464,640
Peel River Estate, county of Parry	249,600
Warrah Estate, county of Buckland	313,298
Total	1,027,538

In addition to this large area of land, the Company also obtained from the Crown the promise of a lease of the coal-fields at Port Hunter (Newcastle) for 31 years. This was, however, afterwards exchanged for a grant of 500 acres, an area which was increased in 1828 to 2,000 acres of coal land, upon which the Company's collieries are now situated.

OCCUPATION OF PASTORAL LANDS.

The pastoral lands of New South Wales have been occupied under various systems. Land was held for grazing in the early days by virtue of tickets of occupation, which ceased to be issued on the 1st May, 1827, after which date persons holding such lands were required to pay a quit-rent of 20s. per 100 acres per annum, and to vacate the land at six months' notice. The requirements of the settlers for depasturing their increasing stock induced them to occupy Crown lands without any right except that of first discovery, and as they extended their operations inland the Legislature found itself compelled, on the 28th August, 1833, to pass an Act protecting Crown lands from intrusion and trespass, and commissioners were appointed for the purpose of safeguarding the interests of the State.

The discovery of new country soon had the effect of taking many of the pioneer squatters beyond the limits of settlement as proclaimed on the 14th

October, 1829, and without authority or license large tracts of unlocated Crown lands were occupied. Fresh regulations, in which severe penalties were enacted, were issued on the 29th July, 1836, with the view of restraining this unauthorised occupation of the waste lands of the colony. These regulations being in many cases disregarded, an Act was passed on the 22nd March, 1839, to further restrain this unauthorised occupation; and to provide the means for defraying the expense of police and commissioners appointed by the Government to protect its estate in the border districts, a yearly assessment was levied upon stock at the following rates:—½d. for every sheep; 1½d. per head of cattle; and 3d. for every horse.

The Imperial Act of the 9th March, 1847, which rendered it lawful for the Queen, by any Order in Council, to make and establish such regulations as should seem meet for the sale and occupation of the waste-lands, was immediately followed by an order introducing an entirely different system in legislation for the pastoral occupation of lands in New South Wales. Hitherto the tenure had been a yearly one, and the fee was paid on the extent of land occupied by the squatter. For this system was substituted fixity of tenure of lease, and the license fee was calculated upon the stock-carrying capacity of the run. Under the regulations issued in 1847, the term of the pastoral leases in the unsettled districts was fixed at fourteen years; in the intermediate division this term was reduced to eight years; and in the settled districts the yearly tenure was retained. The licensing fee was charged at the rate of £10 for 4,000 sheep, or a proportional number of cattle—which was the minimum at which the stock-carrying capabilities of a run could be assessed—and £2 10s. for every additional 1,000 sheep, or proportionate number of cattle, which the run was estimated to carry. In the settled districts lands were let for pastoral purposes only, in sections of not less than 1 square mile in area, the annual rental for each section being fixed at 10s. The holders of alienated lands were permitted to depasture their stock upon Crown lands adjoining their holdings free of charge, this permission, however, constituting only a commonage right. The Occupation Act of 1861, which abolished the Orders in Council, inaugurated a new system, limiting the tenure of pastoral leases to five years in the unsettled and intermediate or second-class settled districts, and leaving the whole of the pastoral leases open to the operations of the free selectors. The evils resulting from this system led Parliament to adopt in 1884, 1889, and finally in 1895, the measures at present in force, the provisions of which are described further on.

ROBERTSON'S LANDS ACT.

The conditions of colonization greatly altered under the powerful attraction of the gold-fields, and after the first excitement of the rush for gold had died out the question of land settlement had to be dealt with in an entirely new spirit, to meet the wants of a class of immigrants of a different type from those contemplated by former enactments, the result being the passing of the Crown Lands Act of 1861, under the leadership of Sir John Robertson. Before this Act became law the conditions of settlement rendered it difficult for men of small means to establish themselves with a fair chance of success. The new measure aimed at facilitating the settlement of an industrial agricultural population side by side with the pastoral tenants, and with this view the Act introduced a principle entirely new to the land legislation of the colony, namely, that of free selection, in limited areas, *before survey.* To this privilege was attached the condition of *bona fide* residence, and the land was to be sold at a fixed price, carrying interest on the balance outstanding, after deducting the amount of the deposit, at the rate of 5 per cent. per annum. This provision, however, was modified by the Amending Act of 1875, under which annual instalments were payable, and the option was given to any conditional purchaser of lands taken up prior to this amendment to avail himself of the change in the method of payment. The system of unconditional sales was, however, continued under the Act of 1861; and during the twenty-three years in which this Act was in operation there were sold 23,470,140 acres conditionally, and 15,572,001 acres by auction, improvement purchase, in virtue of pre-emptive right, or otherwise without conditions, the total area alienated being 39,042,141 acres. In a very large number of cases the land selected or purchased reverted to the State, so that the absolute area sold or in process of sale when the Act of 1884 came into force amounted to only 32,819,023 acres, besides 7,146,579 acres alienated prior to 1861.

THE CROWN LANDS ACTS OF 1884 AND 1889.

The Act of 1861 was, after many amendments, superseded by that of 1884, with the supplementary enactment of 1889. Though differing widely from the former Act in many important particulars, these measures maintained the principle of free selection before survey, but with one essential difference. Under the original Act the whole area of the Crown lands of the colony was thrown open to free selection, and the lands held under pastoral lease were not exempted from the operation of this law. While maintaining the principle of selection before survey, the aims of the Acts of 1884 and 1889 were to give fixity of tenure to the pastoral lessees and to obtain a larger rental from the public lands, at the same time restricting the area sold unconditionally. For this last purpose the holder of a pastoral lease under the old Act was required to surrender one half of his lease, which was resumed by the Crown for subsequent alienation, leasehold or reserve; the other half remaining in the leasehold occupation of the pastoralist under fixity of tenure for a term of years. It was computed on the 31st December, 1884, when this division was made, that there were within the colony 4,313 leased runs, yielding an annual rental in round figures of £268,500, and forming about 1,600 "stations," estimated to contain the bulk of the unalienated public estate, after allowing for reserves, etc. That the increase in the revenue from pastoral occupation, which was one of the principal objects of the alterations introduced in the land legislation by the Act of 1884, has been realised, may be gathered from the fact that during the financial year 1895-6 the total rental received from the occupation of Crown lands amounted to £760,864. The Act of 1884 became law on the 1st January, 1885, and that of 1889 came into operation on the 1st December of that year.

THE CROWN LANDS ACT OF 1895.

Whatever may have been the merits of the Act of 1861, it conspicuously failed to encourage *bona fide* settlement; nor can it be said that the legislation of 1884 and 1889 succeeded where the original Act had failed, as the accumulation of land in large estates continued, while settlement, properly so called, proceeded very slowly. Expert opinion strongly pointed to the necessity of introducing entirely new principles into the agrarian legislation of the colony, and this has been done in the Crown Lands Act of 1895, which not merely remedies the defects of previous legislation, but, while placing land within easy reach of all, seems to supply, by the introduction of new systems of tenure, viz., homestead selections and settlement leases, something that was needed to transform the land speculators into settlers properly so called.

For the purpose of carrying out land legislation, there are three Land Divisions in the colony, viz., the Eastern, the Central, and the Western. These are subdivided into Land Districts; and a Land Agent, whose duty it is to receive applications for land in accordance with certain regulations, resides in each district. Groups of these districts are joined together under an administrative Board, and form what is called a Local Land Board District. The Land Board consists of a chairman and one or two ordinary members. An appeal to the Land Appeal Court may be made against a decision of the Board. This Court is composed of a President and two Commissioners appointed by the Executive, whose decisions in matters of administration have the force of judgments of the Supreme Court; but whenever questions of law become involved, a case may be submitted to the Supreme Court, either at the written request of the parties interested, or by the Land Court acting of its own accord. The judgments given on such appeals are, however, subject to final determination by the Privy Council. The conditions of alienation and pastoral occupation of Crown lands differ in each of the three divisions of the colony.

The Eastern Division has an area of 60,452,000 acres, and includes a broad belt of land comprised between the sea-coast and a line nearly parallel thereto. This line starts from a point midway between the small settlements of Bonshaw and Bengalla on the Dumaresq River, on the northern frontier, and terminates at Howlong on the River Murray, and thus embraces the coastal district of the colony, as well as the northern and southern tablelands. In this division lie all the original centres of settlement, and the markets of the colony are more readily accessible to it than to the other districts. In it, moreover, is to be found some of the best agricultural land in New South Wales. For these reasons, the conditions for the purchase and occupation of the Crown lands in the Eastern Division are more restricted than is the case in the Central and Western Divisions.

The Central Division of the colony embraces an area of 55,460,000 acres, extending from north to south between the western limit of the Eastern Division and a line starting from a point on the Macintyre River, where it is crossed by the 149th meridian of east longitude, and following this river and the Darling to the junction of Mara Creek; thence along that creek to the Bogan River, and across to the River Lachlan, between the townships of Euabalong and Condobolin, along the Lachlan to Balranald, and thence to the junction of the Edward River with the Murray, on the frontier of Victoria. The Central Division thus embraces the upper basin of the Darling River in the northern part of the colony, and portions of those of the Lachlan, the Murrumbidgee, and the other affluents of the Murray in the south. The land in this division is mainly devoted to pastoral pursuits; but experience having proved that agriculture can be successfully carried on, the area cultivated has considerably increased. The rainfall, however, being less regular, and the distance from markets greater than in the Eastern Division, and the land, moreover, being of inferior value, the legislation provides for the selection of larger areas than in the latter district.

The Western Division comprises the whole of the land situated between the western limit of the Central Division and the South Australian border. It embraces an area of 79,970,000 acres, watered by the Darling River and its tributaries. This part of New South Wales is essentially devoted to pastoral pursuits. Water conservation and irrigation may in time counteract climatic conditions and irregular rainfall, and make agriculture possible over this large area, as its soil is adapted to the growth of any kind of crop; but legislation in regard to the occupation of the lands of the district is based upon the assumption that for many years to come there will be little inducement for agricultural settlement.

Under the provisions of the various Acts forming the legislation now in force, land may be acquired as an alienation in the following manner:—(1) By conditional purchase; (2) by auction sale; (3) by purchase in virtue of improvements; (4) by special purchase; and (5) by exchange. The most important of these forms is that of conditional purchase.

The new system of homestead selections is practically a form of alienation, the tenure being freehold, subject to an annual charge in perpetuity.

With regard to the leasing of Crown lands, the different forms of occupation are—(1) Conditional leases; (2) settlement leases; (3) improvement leases; (4) pastoral leases; (5) homestead leases; (6) occupation licenses; (7) annual leases; (8) scrub and inferior land leases; (9) snow-land leases; (10) residential leases on mining-fields; (11) mineral leases; (12) special leases; and (13) artesian-well leases.

Conditional Purchases.—An ordinary residential conditional purchase may be obtained in the Eastern and Central Land Divisions, but not in the Western Division, by any person of or over the age of 16 years, with the usual legal qualifications. Ordinary Crown lands are open to selection at a price of £1 per acre. A deposit of 2s. per acre and a survey fee, according to a fixed scale, must be paid at the time of application. The balance, with interest at the rate of 4 per cent. per annum, is payable in thirty instalments of 1s. per acre, covering principal and interest, the first instalment being due at the expiration of the third year. In the Eastern Division the maximum area which can be selected is 640 acres, and the minimum 40 acres; in the Central Division the maximum is 2,560 acres. Every residential conditional purchase carries with it the right of taking up a conditional lease, which, however, cannot exceed three times the area of the conditional purchase, and the total area of both purchase and lease cannot exceed 1,280 acres in the Eastern Division or 2,560 acres in the Central Division.

The holder is required to reside upon his selection for a continuous term of ten years from the date of application, and residence must commence within three months after the application has been confirmed by the Local Land Board. Within three years from the date on which the application is confirmed the land must be enclosed with such a fence as the Board may prescribe; or, at the selector's own option, substantial and permanent improvements may be substituted for fencing. Application may also be made for the suspension of the conditions of residence and of fencing or improvements for a period not exceeding six months; or the suspension of payment of instalments for a period not exceeding twelve months may be granted by the Minister, but in this case the selector must reside on the land.

Additional purchases may be made until the maximum area is reached, and each additional conditional purchase is subject to the conditions of residence, but the place of residence may be on any of the blocks selected, and in certain cases the additional residence is not insisted upon.

At the expiration of five and ten years from the date of application, inquiries are made by the Land Board, and if the conditions have been satisfactorily fulfilled certificates are issued. A conditional purchase may be transferred after the issue of the first certificate—that is, after five years' residence. After the issue of a certificate of conformity, any purchase of land of 100 acres or more in extent may be subdivided, the balance paid on a portion, and the deed obtained for that part.

The following table shows the total amount payable as principal and interest every year on a selection of 40 acres, the price of which, without interest, is £40. It will be seen that the amount of interest payable is £24 3s., making a total of £64 3s., or £1 12s. 1d. per acre.

When due.	Payments.			How each payment is applied.						Balance owing.			Amount upon which interest is charged.		
				Interest, 4 % for 1 year.			Principal.								
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Deposit of 2s. per acre...............	4	0	0	......			4	0	0	36	0	0	......		
Instalment of 1s. per acre at end of															
3rd year ...	2	0	0	......			2	0	0	34	0	0	......		
,, 4th ,, ...	2	0	0	1	7	2	0	12	10	33	7	2	34	0	0
,, 5th ,, ...	2	0	0	1	6	9	0	13	3	32	13	11	33	7	2
,, 6th ,, ...	2	0	0	1	6	2	0	13	10	32	0	1	32	13	11
,, 7th ,, ...	2	0	0	1	5	7	0	14	5	31	5	8	32	0	1
,, 8th ,, ...	2	0	0	1	5	0	0	15	0	30	10	8	31	5	8
,, 9th ,, ...	2	0	0	1	4	5	0	15	7	29	15	1	30	10	8
,, 10th ,, ...	2	0	0	1	3	10	0	16	2	28	18	11	29	15	1
,, 11th ,, ...	2	0	0	1	3	2	0	16	10	28	2	1	28	18	11
,, 12th ,, ...	2	0	0	1	2	5	0	17	7	27	4	6	28	2	1
,, 13th ,, ...	2	0	0	1	1	10	0	18	2	26	6	4	27	4	6
,, 14th ,, ..	2	0	0	1	1	1	0	18	11	25	7	5	26	6	4
,, 15th ,, ...	2	0	0	1	0	3	0	19	9	24	7	8	25	7	5
,, 16th ,, ...	2	0	0	0	19	6	1	0	6	23	7	2	24	7	8
,, 17th ,, ...	2	0	0	0	18	8	1	1	4	22	5	10	23	7	2
,, 18th ,, ...	2	0	0	0	17	10	1	2	2	21	3	8	22	5	10
,, 19th ,, ...	2	0	0	0	17	0	1	3	0	20	0	8	21	3	8
,, 20th ,, ...	2	0	0	0	16	0	1	4	0	18	16	8	20	0	8
,, 21st ,, ...	2	0	0	0	15	1	1	4	11	17	11	9	18	16	8
,, 22nd ,, ...	2	0	0	0	14	1	1	5	11	16	5	10	17	11	9
,, 23rd ,, ...	2	0	0	0	13	0	1	7	0	14	18	10	16	5	10
,, 24th ,, ...	2	0	0	0	12	0	1	8	0	13	10	10	14	18	10
,, 25th ,, ...	2	0	0	0	10	10	1	9	2	12	1	8	13	10	10
,, 26th ,, ...	2	0	0	0	9	7	1	10	5	10	11	3	12	1	8
,, 27th ,, ...	2	0	0	0	8	6	1	11	6	8	19	9	10	11	3
,, 28th ,, ...	2	0	0	0	7	2	1	12	10	7	6	11	8	19	9
,, 29th ,, ...	2	0	0	0	5	11	1	14	1	5	12	10	7	6	11
,, 30th ,, ...	2	0	0	0	4	6	1	15	6	3	17	4	5	12	10
,, 31st ,, ...	2	0	0	0	4	1	1	15	11	2	0	5	3	17	4
,, 32nd ,, ...	2	0	0	0	1	7	1	18	5	0	2	0	2	0	5
Final payment......................	0	3	0	......			0	3	0	......			......		
Total	64	3	0	24	3	0	40	0	0	......			......		

In the course of the year 1896, however, an Act was passed for the relief of holders of conditional purchasers who found the ordinary rate of payment too burdensome. Under this Act the Minister for Lands is given power to reduce the annual instalment of 1s. per acre to 9d. or even 6d. per acre, always provided that under the reduced rate the balance of purchase money with the interest thereon will be extinguished within sixty-six years from the date when the first instalment after payment of the deposit became due. The conditional purchase in respect of which relief is requested must form part of the holding on which the applicant resides, unless the Minister is satisfied that the applicant holds the land *bona fide* for his own use, and is not able to make payment at the original rate, and is not the holder of a greater area than is necessary for the maintenance of a family.

Non-residential Conditional Purchases.—Any person of or over the age of 21, who has never taken up an ordinary residential conditional purchase, may take up a non-residential conditional purchase in either the Eastern or the Central Land Division. The maximum area is 320 acres, and the conditions are the same in both divisions. The price per acre, and the amount of the deposit and of the instalments, are double those fixed for an ordinary residential conditional purchase, but the scale of survey fees is the same. This form of selection does not entitle the purchaser to hold a conditional lease. The land must be fenced in within twelve months from the date of confirmation; and within five years from that date the holder must satisfy the Board that permanent improvements (not including the boundary fencing) have been made to the value of £1 per acre. If the substitution of other improvements in lieu of fencing be obtained in connection with a non-residential conditional purchase, the sum expended must be at the rate of 30s. per acre. The only addition which a holder can make to his purchase is by increasing it to the maximum area.

Conditional Purchases within Special Areas.—Special areas may be reserved from the operations of the ordinary conditional purchase clauses of the Act, and thrown open to selection under different terms as to payment, with or without the condition of residence; but in such special areas the price of the land cannot be less than £1 10s. per acre if the selector elect to fulfil the condition of residence, while a non-resident purchaser is charged double that price. The maximum and minimum areas that may be selected within special areas are always specified in the proclamation throwing the lands open, but the maximum cannot exceed 320 acres in the Eastern Division, nor 640 acres in the Central and Western Divisions. The deposit required is also stated in the proclamation, being generally one-tenth of the price, and the instalments are one half the amount of the deposit. As in the case of ordinary conditional purchases, the Relief Act of 1896 has given the Minister for Lands power to reduce the rate of instalments previously payable to three-quarters or one-half. The conditions to be fulfilled are similar to those of the ordinary residential and non-residential conditional purchases. Conditional leases of ordinary land can be taken up by virtue of conditional purchases within special areas, but only in the Central Division.

The following is the scale of survey fees for conditional purchases of any description :—

Area.	For an Original Conditional Purchase.			For an Additional Conditional Purchase or Conditional Lease.		
	£	s.	d.	£	s.	d.
For any area not exceeding 4 acres	1	0	0	0	15	0
For every additional acre, or fraction of an acre, up to 10 acres	0	3	4	0	2	6
For 10 acres	2	0	0	1	10	0
For every additional acre, or fraction of an acre, up to 20 acres	0	2	0	0	1	6
For 20 acres	3	0	0	2	5	0
For every additional acre, or fraction of an acre, up to 40 acres	0	1	0	0	0	9
For 40 acres	4	0	0	3	0	0
For every additional 5 acres, or fraction of 5 acres, up to 80 acres	0	2	6	0	1	10½
For 80 acres	5	0	0	3	15	0
For every additional 10 acres, or fraction of 10 acres, up to 320 acres	0	2	6	0	1	10½
For 320 acres	8	0	0	6	0	0
For every additional 15 acres, or fraction of 15 acres, up to 640 acres	0	2	6	0	1	10½
For 640 acres	10	15	0	8	1	3
For every additional 20 acres, or fraction of 20 acres, up to 1,280 acres	0	2	6	0	1	10½
For 1,280 acres	14	15	0	11	1	3
For every additional 40 acres, or fraction of 40 acres, up to 2,560 acres	0	2	6	0	1	10½
For 2,560 acres	18	15	0	14	1	3

Conditional purchases and conditional leases may be converted into homestead selections, on terms stated under the latter heading.

Auction Sales.—Crown lands may be submitted for sale by auction in each Land Division, but not more than 200,000 acres can be thus alienated in any one year. The area of town lots is limited to half-an-acre each, and the upset price cannot be less than £8 per acre; suburban lots cannot be sold in areas exceeding 20 acres, or at a lower upset price than £2 10s. per acre; country lots cannot exceed 640 acres, and the minimum upset price is 25s. per acre. Under ordinary auction sales the payment must be completed within three months, but arrangements may be made under a system of deferred payments, the minimum prices, however, not being less than those given above. In every case a deposit of 25 per cent. must be paid, and the payments cannot extend over a longer period than five years. Deferred payments bear interest at the rate of 5 per cent. per annum.

Improvement Purchases.—Persons who, by virtue of a miner's right or business license issued under the Mining Act, are in authorized occupation of and residing on land within a proclaimed gold-field may, in consideration of improvements made thereon, apply to the Local Land Agent for permission to purchase the land without competition at a price to be fixed by the Land Board. The area, however, is limited to 1 rood of town land and 1 acre of other land, and a distance of 3 miles must separate any two or more portions purchased by the same applicant.

Special Purchases.—Reclaimed lands, unnecessary roads, water frontages, land to which no way of access is obtainable, land insufficient in area for conditional purchase, and other areas of a similar nature, may be sold to the holder of the adjacent property without competition, and in all such cases the price is fixed by the Land Board.

Volunteer Land Orders.—Any person who was enrolled as a volunteer between the years 1868 and 1875, and underwent five years' continuous training, is entitled to a free grant of 50 acres open for conditional purchase; but this form of alienation is now virtually extinct, only seven grants being made in 1893, none during 1894, and one grant during 1895. The orders are transferable.

Exchanges.—Under the 46th section of the Act of 1889 provision is made for the surrender of land in certain cases in exchange for land of equal value, and without any monetary consideration.

Homestead Selections.—The acquisition of land in this manner is a feature of the Crown Lands Act of 1895, and a distinct departure from old forms. Tracts of land are surveyed and valued, and all particulars are notified in the *Government Gazette* and a local newspaper. For a period of forty days after being gazetted, these areas remain open for additional conditional purchase by holders residing on adjacent conditional purchases. Any person of or over 16 years of age, and possessing the usual legal qualifications, is entitled to apply for a homestead selection. The area that may be selected is fixed according to the capabilities of the land; but in no case can it exceed 1,280 acres, and the selector is bound to take the block he applies for as it is gazetted—he cannot take a portion only. The tenure is freehold, subject to rent and residence in perpetuity. At the time of application six months' rent is required. The survey fee is on the same scale as that fixed for conditional purchases, one-third being payable on application, one-third at the end of twelve months, and one-third at the end of the second year. Until the grant is issued the rental is 3d. in the £ (or 1¼ per cent. on the capital value of the land); after the issue of the grant the rent is 6d. in the £ (or 2½ per cent.) The original valuation stands for fifteen years, after which a fresh appraisement is made every ten years. The only condition required by the Crown by way of improvement is the erection of a dwelling-house of the value of £20, and residence must commence within three months from the date on which the application is confirmed. The house must be erected within eighteen months, and afterwards maintained in good order. The obligation of perpetual residence is a provision made to ensure the land being used for the purpose intended, and as a guard against monopoly; nevertheless, under certain circumstances the condition of residence may be relaxed. The interest of a holder is liable to be forfeited for non-fulfilment of conditions or non-payment of rent. After five years the holding may be transferred, but the condition as to residence attaches to each successive transferree. Tenant right in improvements is given if the selection is surrendered or forfeited. Any improvements which may be on the land when it is selected must be paid for at their appraised value in four equal yearly instalments, with interest at the rate of 4 per cent. per annum.

If a number of homestead selectors desire to form a village adjacent to their holdings, the condition as to residence on the holdings may be dispensed with at the discretion of the Governor, and residence in such village or settlement substituted, subject to such conditions as may be prescribed.

The homestead selector may avail himself of the privilege of protecting his holding, so that it cannot be sold under a writ of execution or taken from him in the case of insolvency, but to effect this protection the selector must be solvent at the time when he applies for registration. Should a holder be compelled by adverse circumstances to abandon his selection, a certificate to that effect may be obtained, qualifying him to apply for another selection.

In the case of persons desirous of making a home on the land, but who for a time are debarred by their present calling or other circumstances from taking up their residence thereon, provision is made for residence by a deputy, who must be approved, however, by the Local Land Board, and the applicant must satisfy the Board that it is his intention subsequently to reside on the land. The following special conditions are imposed in such cases :—(1) The full amount of survey fee must be paid at the date of application; (2) the rent chargeable before the issue of the grant is 3½ per cent. of the capital value; (3) the value of the dwelling erected must be £40; and (4) within three years one-tenth of the area must be in full tillage, and during the fourth and fifth years this area must be increased to one-fifth.

Conditional purchases and conditional leases may be converted into homestead selections, the rent chargeable being at the rate of 2½ per cent. on the capital value, which, under the Conditional Purchasers Relief Act of 1896, shall for the first ten years be taken at £1 per acre for a conditional purchase not within a special area; at the original price for a conditional purchase within a special area; and for a conditional lease, at a sum obtained by capitalising the annual rent of such lease on a 2½ per cent. basis. Such part of the payments made towards a conditional purchase as may have been applied to the reduction of the principal sum, and not taken to defray interest charges on the outstanding balance, is credited to the holder as rent of the homestead selection from the time of conversion.

The inducement offered to persons of slender means by this system, and the advantages which the homestead selector has compared with the holder of a conditional purchase, are very apparent. For instance, the amount payable during the first year on a homestead selection of 640 acres, valued at £1 per acre, is only £10 13s. 9d., while in the case of a conditional purchase, the same area would entail an expenditure of £74 15s. The improvements which have to be effected under a conditional purchase are not required on a homestead selection, and the land of the homestead selector, as has been stated, cannot be taken from him under any legal process. From the eagerness with which the areas already offered have been taken up, there is no doubt that this form of acquiring land will be largely availed of.

Conditional Leases.—Crown lands open to ordinary conditional purchase in the Eastern and Central Land Divisions are available for conditional lease in connection with residential conditional purchases, excepting those within special areas in the Eastern and Western Divisions. The area of any conditional lease cannot exceed three times that of the conditional purchase or purchases in right of which it is applied for, and cannot be less than 40 acres; nor can the combined area of the purchase and lease exceed 1,280 acres in the Eastern Division, or 2,560 acres in the Central Division. The land applied for must also adjoin the conditional purchase by virtue of which it is granted. The lease has a term of twenty-eight years, and pending appraisement a provisional rent of 2d. per acre is payable annually. The first appraisement made by the Land Board stands for fifteen years, and for the remaining period the land is subject to a reappraisement.

As conditional purchases other than within special areas cannot, under existing legislation, be taken up in the Western Division, no conditional leases are obtainable there. The conditional leases current in this division were pre-emptive leases converted under the provisions of the Land Act of 1884.

At any time during its currency a conditional lease or any portion of it adjoining the previous series may be converted into an additional conditional purchase, and as this right is almost invariably availed of the land held under conditional lease may practically be considered as alienated.

Settlement Leases for Agriculture and Grazing.—These areas, like homestead selections, are specially set apart by notification in the *Government Gazette.* The land is measured, and each portion is valued according to its capabilities and situation. Areas set apart for agricultural purposes cannot exceed 1,280 acres, but for grazing purposes the maximum is 10,240 acres. The term of a lease is twenty-eight years, and the annual rent is 1¼ per cent. on the capital value. Six months' rent, together with the prescribed survey fee, must accompany the application. The appraised value of improvements on the land when taken up, with interest at 4 per cent. per annum, may be paid in three equal yearly instalments. The conditions are continuous residence during the term of the lease, and the enclosing of the holding within five years from the issue of the lease; the lessee is also required to conform to any regulations made regarding noxious animals and the clearing of scrub, and such other provisions as may be deemed expedient in the public interest. The lease cannot be assigned or sub-let without the consent of the Minister. During the last year of the term the lessee may apply for that part of the lease on which his residence stands as a homestead selection, the area not to exceed 1,280 acres.

The following is the scale of survey fees for settlement leases. In any case where the cost of survey proves to be less than the scale rates, the difference may be refunded:—

	£	s.	d.
Up to 2,560 acres, as for an original conditional purchase (*see* page 255.)			
For 2,560 acres	18	15	0
For every additional 40 acres up to 3,840 acres, 2s. 6d.			
For 3,840 acres	22	15	0
For every additional 40 acres up to 5,760 acres, 2s.			
For 5,760 acres	27	11	0
For every additional 40 acres up to 7,680 acres, 1s. 6d.			
For 7,680 acres	31	3	0
For every additional 40 acres up to 10,240 acres, 1s.			
For 10,240 acres	34	7	0

Improvement Leases.—This form of lease, like settlement leases and homestead selections, is an introduction of the Crown Lands Act of 1895. The lands which may be taken up are comprised of scrub and inferior land in any division. They are disposed of either by auction or tender, and in no case can the area of a lease exceed 20,480 acres. The term of a lease is twenty-eight years; the rent is the amount bid at auction or accepted by tender, but an upset price may be fixed, and the Governor is not bound to accept any tender. The provisions made for the improvement of the land vary according to the circumstances of each case, and the last holder has tenant-right in improvements. Residence on the land is not compulsory; but if the lessee resides thereon he may, during the last year of the term, make application to convert the residential portion into a homestead selection; but the area cannot exceed 640 acres, and must carry improvements to the value of £1 per acre.

Pastoral Leases.—The largest areas taken up for pastoral purposes are held under this form of lease. Under the Act of 1884 the large holdings of the squatters were each divided into two portions, called respectively the resumed area and the leasehold area. The resumed area was leased under occupation license, renewable annually, but the land remained open for selection under conditional purchase and conditional lease. The leasehold area was returned to the lessee, who was entitled to hold it for a fixed term of years, varying in each Land Division. In the Eastern Division the pastoral leases expired in 1890, and they cannot now be renewed, nor can fresh areas be leased. In the Central Division pastoral leases terminated in 1895, but in accordance with the privilege granted under the Act of 1889, a great number of the leases have been extended for short periods, varying from one to five years. Provision has, however, been made in connection with these renewals for the withdrawal of such portions as may be required under other forms of settlement. After due inquiry by the Land Board, the Minister can authorise the division of the area into two parts as nearly equal as is practicable, and the portion from which withdrawals may be made is subsequently defined. By way of compensation for such withdrawals, a further extension of time is given for the remainder of the lease.

The pastoral leases in the Western Division were, under the Act of 1884, given a currency of fifteen years, which was increased to twenty-one years by the Act of 1889, and by the Crown Lands Act of 1895 the term was further extended to twenty-eight years, calculated from the commencement of the lease. The rent of each lease varies with the appraised value of the land, and lessees have tenant-right in improvements. The resumed area may be amalgamated with the leasehold area in cases in which the Local Land Board, after inquiry, is satisfied that such resumed area is not required and is not likely to be required for settlement before the expiration of the pastoral lease. Withdrawals of portions of the pastoral leases for settlement purposes may be made in the Western Land Division as in the Central; but the maximum area which can be withdrawn is limited to one-eighth of the leasehold, and the land must not be more than 10 miles distant from the boundary of a town containing at least fifty inhabitants.

Occupation Licenses.—Land held under occupation license consists mostly of the resumed areas of pastoral holdings divided by the Act of 1884, and the expired leases of the Eastern and Central Divisions. Land withdrawn from pastoral lease for settlement in the Central and Western Divisions may also be held under occupation license. A pastoral lessee in the Central Division has a preferential right to an occupation license of any area formerly held by him under pastoral lease, and in both the Central and Western Divisions this privilege extends to land withdrawn from the existing lease for settlement purposes. The license is annual, covering the calendar year, and the fee is payable at the time of granting or renewing the license. Under an amending Act, passed in 1896, land held under occupation license may be withdrawn from the holder on receipt of an application for such land as a homestead selection, or under settlement lease, provided the holder of the occupation license is informed of the application by the Land Agent within one week of its receipt.

Artesian Well Leases.—Holders of occupation licenses or annual leases may take up artesian well leases. Only one such area may be leased out of each 64,000 acres held under occupation license, and not more than three areas out of the same occupation license, the total extent of an artesian well lease being limited to 10,240 acres.

Homestead Leases.—This form of lease is granted for the resumed areas or the vacant lands of the Western Division only; lands held under annual lease or occupation license are, therefore, open to homestead lease. The minimum area obtainable is 2,560 acres, and the maximum, 10 240 acres. If the maximum area is not taken up in the first instance, additions may be made until that area is reached, but these additions may not consist of less than 2,560 acres, except in certain cases, when the minimum additional area may be 640 acres. Additional leases terminate on the same date as the original lease, and have consequently a shorter term. The term of lease is twenty-eight years, and the rent is appraised every seven years. A deposit of 1d. per acre, with £10 on account of survey fee, is required on making the application. Within sixty days from the date on which the lease is gazetted the balance of the cost of survey is due; and the rental is payable annually in advance. Continuous residence for six months in each year for the first five years is required. Residence must commence within ninety days from the approval of the lease; but the lessee may, at his own risk, enter into occupation immediately after making application. The date of commencing the six months' residence in any year must be previously notified to the Local Land Board. The boundaries of the land must be enclosed within two years from approval of the lease with such a fence as the Board may prescribe; upon satisfactory cause being shown, however, a suspension of the conditions as to residence and fencing may be obtained, and an extension of time granted. The Local Board is empowered to make inquiry as to whether the conditions have been adhered to by the lessee, and the lease is liable to forfeiture in the event of their non-fulfilment. Arrangements for the sub-letting of homestead leases are required to be in writing, and a certified copy of the document sent to the Chairman of the Local Land Board, any disregard of this regulation being taken as evidence that the lease is not held in good faith. After the conditions as to residence are fulfilled the lease is transferable. The portion of the lease on which the lessee has his dwelling may, during the last year of the term, be applied for as a homestead selection.

Annual Leases.—Crown lands which are not held under other forms of lease, and are not exempt from lease, may be let on annual lease in any Land Division by auction or tender, or upon application, in areas not exceeding 1,920 acres; and lands reserved from sale are not withheld from annual lease. The minimum rental cannot be less than £2 for every 640 acres or lesser area. An original lease dates from the first day of the month following its notification in the *Gazette*, or if the land has been leased at auction, the first day of the month following the date of sale; but the first year expires on the 31st December, rent being charged only for the number of months during which the leasehold has been occupied, so that all renewals of leases cover the calendar year. Improved lands let on annual lease are subject to an additional rent for the use of improvements, and where the improvements do not belong to the Crown an agreement has to be come to by the parties concerned, failing which an appraisement is made by the Land Board. The improvements must be of a fixed and substantial character and necessary for the occupation of the land, and before valuation the owner may, with the permission of the Board, take away such as are of a removable nature. Under the Crown Lands (Homestead Selections and Settlement Leases) Act of 1896 (59 Vic. No. 26) land held under annual lease is withdrawn by application for such land as a homestead selection or under settlement lease, but the Land Agent must notify the holder of the annual lease within one week of the receipt of the application.

Scrub Leases.—Lands, whether vacant or otherwise, wholly or partly covered with scrub or noxious undergrowth may, upon the recommendation of the Local Land Board in any district, be declared scrub lands, and after notification in the *Government Gazette*, may be leased by auction or tender, or upon application, for such periods, not exceeding twenty-one years, as the Minister may deem expedient. Under the Crown Lands Act of 1895, however, the leases of scrub and inferior lands may, upon application, be extended by the Governor to twenty-eight years, the term allowed for improvement leases. Until they are leased in this form, scrub lands cannot be withdrawn from any lease or license under which they may be held; and if the lands form part of a homestead or a pastoral lease, the scrub lease can only be granted to the homestead or the pastoral lessee; but a homestead or a pastoral lessee cannot take up a scrub lease outside his own holding, and the term of his scrub lease expires with that of his homestead or pastoral lease. During the whole currency of a scrub lease, the land cannot be made available for purchase or other form of lease. The conditions are that the holder shall take such steps for the destruction of the scrub and noxious growth as the Board may direct, and shall afterwards keep the land free from such growth. These operations must be commenced within three months from the date of the lease, and in case of non-fulfilment of conditions or non-payment of rent the lease is liable to be cancelled and all improvements forfeited to the Crown.

Leases of Inferior Lands.—Vacant lands of an inferior character or in isolated positions, and which have not been held under any form of tenure or have been abandoned, may be offered for lease by notification in the *Government Gazette.* Within thirty days after this notice has been given the land may be leased by auction or by tender, subject to the conditions specified in the *Gazette*, the upset rental being fixed by the Minister on the report of the Local Land Board. A lease of any such land which has been put up at auction may upon application be obtained at the upset rental. The term of lease is twenty years or under; but the Governor has power, under the Crown Lands Act of 1895, to extend the time to twenty-eight years.

Snow-land Leases.—Vacant lands, or lands held under annual lease or occupation license, which are usually covered with snow during a part of each year and are unfit for continuous use or occupation, may, on the recommendation of the Land Board, be submitted by the Minister for lease by auction. The minimum area which can be thus leased is 1,280 acres, and the maximum area, 10,240 acres. The first year's rent, together with the survey fee, is due at the time of sale.

The period of lease is seven years; but on application not later than twelve months before the expiration of that time, an extension of three years may be granted, subject to re-appraisement of rental, notice of which is given twelve months prior to the expiration of the lease. No person can hold more than two areas under snow-land lease.

Residential leases on Gold and Mineral Fields.—Any holder of a miner's right or mineral license is entitled to apply for a residential lease of vacant lands not exceeding 20 acres in extent, within any proclaimed gold or mineral field. Applications must be accompanied by a deposit of £1, the prescribed survey fee, and a provisional rent at the rate of 1s. per acre or part of an acre. The lease may be granted for any term not exceeding fifteen years, and is held subject to the following conditions:—The lessee must, during the whole currency of the lease, hold a miner's right or mineral license. He must make the leasehold his usual and only home, and residence must commence within three months from the date of notification of the lease. Within twelve months he must, if such improvements are not already existing, erect such buildings and fences as are required for the actual residence upon and the beneficial use of the land. Any portion of the land which in the opinion of the Minister is required for mining or public purposes, may be withdrawn from the lease. Any duly authorised person may enter on the land for the purpose of seeking work or winning gold or other mineral, and the residential lease confers on the holder no right to do this himself—he must procure the necessary authority before he may do so. Other conditions which may be imposed are specified in the notification. On the expiration or withdrawal of the lease the lessee has tenant-right in improvements.

COST OF ADMINISTRATION.

The following statement shows the cost of the administration of the Lands Department during the period from 1885 to the 30th June, 1896:—

Year.	Cost of Survey of Lands.	Expenditure for General, Miscellaneous, and Special Services.	Total Cost of Administration.
	£	£	£
1885	315,357	174,568	489,925
1886	378,085	172,167	550,258
1887	299,370	180,011	479,381
1888	248,661	205,747	454,408
1889	223,059	243,378	466,437
1890	224,096	174,284	398,380
1891	232,672	170,495	403,167
1892	209,735	200,859	410,594
1893	180,325	181,135	361,460
1894	155,184	163,145	318,329
*1895	73,770	86,659	160,429
1895-6	155,595	163,108	318,703

* To 30th June.

The figures just given might prove misleading without some reference to the actual revenue received. In the chapter on "Public Finance" will be found a statement of the revenue from the Crown lands of the colony, and if from the figures there given be subtracted the receipts from mining occupation and the balance compared with the cost shown in the table just given, the following results will be obtained:—

Year.	Percentage of Total Revenue Expended—		
	On Survey.	On General Expenses.	Total.
1885	17·82	9·86	27·68
1886	24·48	11·15	35·63
1887	12·89	7·77	20·66
1888	11·24	9·30	20·54
1889	10·87	11·86	22·73
1890	10·36	8·06	18·42
1891	10·99	8·05	19·04
1892	10·19	9·76	19·95
1893	8·52	8·56	17·08
1894	7·46	7·84	15·30
*1895	7·09	8·33	15·42
1895–6	7·86	8·24	16·10

* To 30th June.

The figures just given show a notable improvement. It must, however, be borne in mind that the expenditure on surveying is added in some instances to the cost of the land, and is therefore not altogether a fair charge against administration.

PROGRESS OF ALIENATION.

The growth of land alienation under the legislation of 1861 and its subsequent amendments, and the operations of the settlers under the Acts of 1884, 1889, and 1895 in the matter of unconditional settlement, are summarised below:—

Mode of Alienation.	Lots.	Area.
	No.	acres.
Sales by auction—		
Town	34,514	16,486
Suburban	13,526	66,676
Country	61,809	9,211,343
Total sales by auction	109,849	9,294,505
Selection after auction	16,001	1,717,714
Sales by virtue of improvements	24,253	2,786,145
„ by virtue of pre-emptive rights	2,114	560,825
„ of unnecessary roads	980	7,838
„ of water reservations	205	648
„ by special appraisements	253	2,110
„ of reclaimed lands	576	941
Grand total of unconditional sales	154,231	14,370,726

As regards conditional sales, the following were applied for under the various Acts since the date of the Crown Lands Act of 1861 :—

			Selections applied for.	
			No.	Acres.
Under the Crown Lands Act of 1861—				
To May 24, 1880			136,389	14,982,120
Under the Crown Lands Act of 1880—	No.	Acres.		
1880 (from May 25)	4,927	694,951		
1881	14,220	2,329,202		
1882	14,606	2,392,218		
1883	10,674	1,617,712		
1884	10,657	1,453,937		
Total			55,084	8,488,020
Total to December 31, 1884			191,473	23,470,140
Under the Crown Lands Acts of 1884, 1889, and 1895,—	No.	Acres.		
1885	5,377	1,165,352		
1886	6,080	963,197		
1887	4,769	793,004		
1888	5,364	865,199		
1889	6,205	903,160		
1890	8,526	1,713,577		
1891	6,154	1,303,414		
1892	4,396	816,399		
1893	3,393	533,805		
1894	2,617	414,355		
1895	1,751	253,431		
Total			54,632	9,724,893
Grand total to December 31, 1895			246,105	33,195,033

The number of selections cancelled, forfeited, lapsed, declared void, and converted into homestead selections, together with the balance of such voidances, etc., and that of increased over decreased areas, amounted to 75,612 conditional purchases, covering 10,280,642 acres, thus reducing to 170,493 lots and 22,914,391 acres the number and area of selections which remained in existence at the close of the year 1895. Deeds have now issued upon 22,610 completed purchases, covering 2,648,330 acres, so that the number of purchases still standing good, but upon which the conditions have not been fulfilled, is 147,883, covering an area of 20,266,061 acres.

Under the Crown Lands Act of 1895, 202 applications were received during that year for homestead selections, the aggregate area applied for being 62,576 acres. Of these applications, 13, covering 6,572 acres, were disallowed, while 63, amounting to 24,625 acres, were confirmed, and the balance of 126, for a total area of 31,379 acres, were still awaiting consideration. In addition to the foregoing, there were 3 conversions of conditional purchases, of a total area of 1,327 acres.

In addition to the alienation of land by conditional and unconditional sales, the following were granted under the Volunteer Land Regulations of 1867 :—

Year.	Area of Volunteer Land Orders granted.	Year.	Area of Volunteer Land Orders granted.
	acres.		acres.
1871	6,049	1885	1,936
1872	7,317	1886	740
1873	2,880	1887	1,797
1874	7,756	1888	1,433
1875	14,498	1889	783
1876	18,758	1890	882
1877	14,079	1891	1,160
1878	13,022	1892	590
1879	26,506	1893	350
1880	18,886	1894	Nil.
1881	13,876	1895	50
1882	5,649		
1883	4,358	Total	167,795
1884	4,500		

The following table shows the area of land granted for general and religious purposes from 1862 to 1895 :—

Year.	Area of Grants.	Year.	Area of Grants.	Year.	Area of Grants.
	acres.		acres.		acres.
1862	857	1874	6,626	1886	11,100
1863	808	1875	673	1887	5,377
1864	301	1876	5,557	1888	3,310
1865	2,855	1877	2,899	1889	1,902
1866	12,288	1878	1,811	1890	1,566
1867	13.935	1879	21,762	1891	916
1868	11,310	1880	20,637	1892	8,735
1869	3,672	1881	7,113	1893	5,833
1870	11,970	1882	1,969	1894	41,678
1871	4,319	1883	2,535	1895	7,590
1872	1,969	1884	6,626		
1873	2,535	1885	481	Total	233,515

The operations of the various Orders, Regulations, and Acts of Council and of Parliament for the disposal of the public lands, since the foundation of the colony, have given the following results:—

	Acres.
Area granted and sold by private tender and public auction at prices ranging from 5s. to 20s. per acre, prior to the year 1862	7,146,579
Area unconditionally sold, 1862–1895 inclusive	14,370,726
Area conditionally sold, for which deeds have issued, 1862–95 inclusive	2,648,330
Area granted under Volunteer Land Regulations of 1867 to 31st December, 1895	167,795
Area granted for public purposes, 1862–95	233,515
Total area covered by deeds	24,566,945
Area in process of alienation under system of deferred payments standing good on 31st December, 1895	20,266,061
Area in process of alienation under system of homestead selection	56,004
Area of conditional purchases converted into homestead selections	1,327
Total alienated or in process of alienation	44,890,337

It has been found impracticable to separate the area alienated by grant from that sold by private tender, as the records of early years are incomplete upon this point.

The following statement shows the amount paid for lands purchased from the State from the year 1821 to the end of 1895:—

Period.	Amount received.
	£
1821–1861	3,785,002
1862–1871	2,359,548
1872–1881	17,015,358
1882–1891	13,917,457
1892–1896*	5,839,854
Total received	42,917,219
Less refunds	1,376,147
Net amount received ...£	41,541,072

* To 30th June.

This includes £17,393,321 paid on account of conditional purchases. The amount outstanding on conditional purchases at the end of 1895 was £13,187,636, making the total amount paid and owing on all lands sold £54,728,708.

The area leased to pastoral tenants and others at the end of 1895 comprised 124,150,019 acres (including leases to miners under the Mining Act) and was subdivided as follows:—

	Acres.
Pastoral Leases	53,426,693
Occupation Licenses	40,817,284
Conditional Leases	12,953,203
Homestead Leases	10,250,437
Annual Leases	5,564,302
Other Leases	1,046,122
Leases under the Mining Act	91,978
Total	[illegible]

The total available area of the colony is 195,882,150 acres, and deducting the area sold and otherwise alienated, 44,890,337 acres, and the area leased 124,150,019 acres, making a total of 169,040,356 acres, there remained a balance of 26,841,794 acres, representing the area of country neither alienated nor leased, including roads, unoccupied reserves, and land unsuitable for settlement.

AREA AVAILABLE FOR SETTLEMENT.

In 1895 attention was again directed to the question of land legislation, as it was rightly contended that the Lands Acts of 1884 and 1889 had failed to prevent the accumulation of enormous landed estates in the hands of a very limited number of proprietors, backed up by the great financial institutions of the country. Although it may be said in defence of the policy pursued by this class of landowners, that in many cases it was forced upon them by the defective nature of legislation, which failed to discriminate between the very different interests of the pastoralists and the agricultural settlers, it must nevertheless have been patent to everybody that the rate at which these immense alienations of the public estate were being carried on threatened in a very short period of time to place formidable obstacles in the path of healthy settlement. The Acts mentioned have now, however, been superseded by the Crown Lands Act of 1895, which came into operation on the 1st June of that year. As has already been shown, many radical changes in land legislation have been effected by this Act; but it must be borne in mind that immediate remedial action can only be taken in connection with that portion of the Crown lands which has not yet been alienated, or leased to Crown tenants for a definite period of years. Leases granted under certain conditions, such as those attached to conditional leases, which carry with them the right of purchase at any time during their currency, may be considered to be in effect a form of alienation, as but a comparatively small portion of these areas is ever likely to return to the public estate. Lands under homestead lease in the Western Division, scrub lands, snow-covered areas, and inferior lands leased for long periods of fixed tenure, as well as pastoral leases renewable for long terms, form another category of lands upon which past legislation lays a prescriptive claim. The area which can be beneficially affected by the Act of 1895 is, therefore, limited to the area which is unalienated, or for which contracts have not been entered into, further reduced by the excision of reserves for public purposes, for goldfields and other forms of mining enterprise, and for railways and other purposes. At the close of 1895 there were 24,566,945 acres absolutely alienated, for which deeds had issued; 20,266,061 acres conditionally sold, the conditions of purchase not being complete; 56,004 acres alienated and in process of alienation under the system of homestead selection, subject to the payment of rent in perpetuity; 1,327 acres of conditional purchases converted into homestead selections; and 12,953,203 acres leased with the right to purchase; in all, 57,843,540 acres which have been placed entirely beyond the scope of present or future legislation.

The areas under long contracts of lease, in some cases with right of renewal, which no legislation can affect until the expiration of the fixed period of their tenure, are given below :—

	Acres.
Homestead Leases in Western Division for 28 years	10,250,437
Scrub Leases for 21 years, with right of renewal for a further period of 7 years	121,297
Snow Leases for 7 years, with right of renewal for a further period of 3 years	82,980
Leases of inferior lands, etc., for 20 years, with right of renewal for a further period of 8 years	488,475
Pastoral Leases in Western Division for 28 years	38,612,218
Other Leases	445,348
Total	50,000,755

The entire area affected by contracts existing at the end of 1895 amounted therefore to 107,844,295 acres, and these figures show how greatly the extent of territory to which remedial legislation is applicable has diminished. Of the balance, amounting to 88,037,855 acres, a large portion comprises reserves of various kinds; and if allowance be made for mountainous and other sterile lands, it will probably be found that the area suitable for occupation which the State has to offer intending settlers is somewhere about 63,000,000 acres. A further reduction must be made in order to arrive at the area available for immediate occupation, as in the Central Division a very large area has been renewed for various short periods in accordance with the privilege granted under the Crown Lands Act of 1884. In the course of the year 1895 an area covering 3,767,145 acres became available for settlement, and during the the next six years leases for the following areas will also expire as noted:—

Year.	Acres.	Year.	Acres.
1896	516,644	1900	10,444,633
1897	1,226,315	1901	46,053
1898	1,338,559		
1899	1,216,152	Total	14,788,356

Including the area which fell in during 1896 (516,644 acres), and making allowance for the fact that under the Act of 1895 half of these leaseholds may be withdrawn to meet the requirements of settlement as they arise, the total extent of country open to the immediate influence of legislation is limited, therefore, to but little more than 55,000,000 acres. From a careful computation the area estimated to be immediately available would appear to be distributed in the following proportions within the three great divisions of New South Wales :—

	Acres.
Eastern Division	12,000,000
Central ,,	19,000,000
Western ,,	24,000,000

Under present conditions the Western Division is not suitable for agricultural settlement, and the area, therefore, left open to the operations of the small settler combining agriculture with pastoral pursuits does not exceed 31,000,000 acres, or about one-sixth of the territory of New South Wales.

The progress of alienation and conditional settlement by purchase and lease at various periods from 1861 to 1884, and annually since the last-mentioned year, is shown in the following table:—

At end of year.	Area Alienated for which deeds have issued.	Area Conditionally Purchased, standing good on 31st December.	Area Conditionally Leased on 31st December.	Area under Homestead Selection.
	acres.	acres.	acres.	acres.
1861	7,146,579	....	....	....
1871	8,630,604	2,280,000	....	....
1881	22,406,746	12,875,392	....	....
1884	22,779,733	16,158,588	....	....
1885	22,872,366	16,554,900	1,900,800	....
1886	22,991,208	16,945,579	3,955,200	....
1887	23,106,700	17,262,567	4,802,560	....
1888	23,259,048	17,499,655	6,121,600	....
1889	23,442,013	17,920,002	6,928,804	....
1890	23,615,720	19,048,085	9,903,949	....
1891	23,775,410	19,805,892	11,234,131	....
1892	23,937,392	20,115,467	14,370,803	....
1893	24,138,576	20,214,361	12,707,423	....
1894	24,358,717	20,316,605	12,870,191	....
1895	24,566,945	20,266,061	12,953,203	57,331

As already pointed out, the land held under conditional lease is virtually alienated, seeing that the holder has the right of converting his lease into a freehold at any time during its currency.

EFFECTS OF LAND LEGISLATION.

The lands specially referred to in the following examination are those included in rural holdings over 1 acre in extent, from which the agricultural and pastoral production of the country is obtained, municipal areas being dealt with separately as regards extent and revenue in another part of this volume. In the preceding pages an account has been given of the old methods of land alienation, and of the various Acts of Parliament which now regulate the division of the public estate among the settlers: the object of the examination which follows is to show what have been the effects of past and present legislation upon the settlement of the territory.

When the agitation which culminated in the framing of the Crown Lands Act of 1861 was in progress, it was contended that the Orders-in-Council then in force favoured the occupation of the country lands by the wealthier classes, and the principles of free selection before survey and of deferred payments were introduced in the new legislation with the object of facilitating the settlement of an agricultural population side by side with the great pastoral tenants of the Crown. The statistical records for the year 1861 show that at the close of that year, and just before the new legislation had come into force, there were already 21,175 holders of rural lands, of whom 17,654 were located in the old settled districts, comprising twenty counties, grouped around three principal centres—the metropolis and the county of Cumberland, the Hunter River Valley, and that portion of the central tableland of which Goulburn, Bathurst, and Mudgee were the first towns; while the remaining 3,521 settlers were scattered over the pastoral districts. The figures showing the area held by these settlers do not discriminate between the land alienated and that occupied under lease from the Crown; but they show that in the old settled districts there were some 254,347 acres under cultivation—or an average of 14 acres per holding—and 8,522,420 acres used for stock; whilst in the pastoral districts 43,228 acres were cultivated, and 54,716,463 acres were occupied for grazing; so that at that time 63,536,458 acres, representing about one-third of the territory of the colony, were already in the occupation of the settlers.

In addition to the clauses inserted in the Act of 1861 in the interests of colonists of small means, certain provisions were retained which secured the interests accrued to the pastoralists under former legislation, of which they availed themselves to the utmost. By means of auction sales of country lands at the upset price of 20s. per acre, of unconditional selections of lots not bid for at auction, of purchases made in virtue of improvements, and of the right of pre-emption to certain lands under the old Acts of Council, the accumulation of immense estates was greatly facilitated. The sales of lands subject to conditions of residence and improvements, though ostensibly made to foster the settlement of a numerous class of small farmers, were also availed of in the interests of station owners, to whom the purchases were transferred in great numbers immediately upon completion of the conditions of residence and improvements required under the Act. The evils resulting from the antagonistic interests of these two classes of settlers were partly checked by the amended law of 1884, which put a stop to the wholesale alienation of land by auction, unconditional selection after auction, and sales in virtue of pre-emptive rights. The clause relating to improvement purchases was also modified, and made applicable only to small areas in gold-fields which might be purchased by resident miners in virtue of certain improvements; and the area offered at auction sales was restricted to a maximum of 200,000 acres yearly; but conditional settlement was favoured by permitting the maximum area allowed to be taken up by free selectors to be considerably increased, the conditions of residence being increased to five years instead of three, and the fulfilment of the conditions of fencing and improvements rendered more stringent.

These regulations, however, did not, in any sense, fulfil the expectation of the legislators in regard to settling a yeomanry upon the soil, as the figures relating to transfers of conditional purchases published further on will show that, when other means of increasing the area of individual estates failed, the traffic in transfers of conditionally-purchased lands, with increased areas, supplied the deficiency. What effect the radical changes introduced by the Land Act of 1895 will have remains to be seen, but there is little doubt that great improvement will result from the new system.

The principal element which contributed to the aggregation of great landed estates was that of auction sales of country lands, which were measured in vast areas upon the application of the run-holders, who bought them up generally at the upset price—at first a minimum of £1 per acre, raised in 1878 to £1 5s. per acre.

The following analysis of the different methods by which lands have been alienated will account for the present state of rural settlement. Particulars of the auction sales of country lands from the year 1862 to 1895 inclusive are given hereunder:—

Year.	Lots.	Total Area.	Amount realised.	Average Price per Acre.		
	No.	acres.	£	£	s.	d.
1862	532	29,729	33,208	1	2	4
1863	765	15,392	18,163	1	3	7
1864	542	31,393	35,549	1	2	0
1865	1,289	63,303	71,532	1	2	7
1866	801	65,799	68,197	1	0	9
1867	806	70,701	75,432	1	1	4
1868	729	50,636	52,169	1	0	7
1869	1,236	93,428	96,364	1	0	8
1870	797	51,722	54,010	1	0	11
1871	1,034	49,303	50,270	1	0	5
1872	697	61,073	61,505	1	0	2
1873	2,274	274,581	278,110	1	0	3
1874	4,064	580,753	596,785	1	0	6
1875	6,658	978,377	992,786	1	0	3
1876	8,040	1,685,650	1,707,323	1	0	3
1877	8,380	1,829,613	1,838,457	1	0	1
1878	4,564	861,049	1,071,486	1	4	10
1879	2,012	353,372	447,557	1	5	4
1880	2,082	346,679	419,523	1	4	2
1881	2,691	523,657	616,309	1	3	6
1882	2,474	503,547	630,494	1	5	0
1883	226	25,826	41,268	1	11	2
1884	397	38,215	72,412	1	17	11
1885	51	1,654	5,513	3	5	10
1886	793	58,088	100,627	1	14	8
1887	1,124	103,748	158,747	1	10	7
1888	1,781	100,128	230,294	2	6	2
1889	482	18,430	42,389	2	6	3
1890	686	66,160	113,795	1	14	5
1891	703	44,348	89,139	2	1	8
1892	896	80,062	148,115	1	17	0
1893	1,019	91,964	175,115	1	18	1
1894	699	42,973	86,125	2	0	1
1895	485	19,990	57,008	2	2	3
Total	61,809	9,211,343	10,535,776	1	2	11

These figures show that the struggle between selector and squatter did not begin in earnest until about the year 1873, when the effects of the legislation of 1861 were felt in an acute form; but during the ten years that followed, this process of defence was applied in a wholesale manner by the pastoral tenants to save their possessions from encroachment through the operations of the selectors. The system was modified by the legislation of 1884, the object of auction sales of country lands now being to obtain revenue by the sale of select parcels of land at a higher average price and in much smaller average areas. Since the year mentioned, this system of alienation has ceased to be of use in consolidating large pastoral estates.

Among other means offered for the unconditional purchase of Crown lands, that of selection at the upset price of lots not bid for at auction also disappeared with the passing of the Act of 1884. The following table shows the results of this system of purchase during the period 1862 to 1883, when it was in operation:—

Year.	Lots.	Total Area selected.	Year.	Lots.	Total Area selected.
	No.	acres.		No.	acres.
1862	477	22,347	1874	1,112	98,850
1863	362	17,384	1875	1,343	101,718
1864	248	12,388	1876	1,126	95,681
1865	251	12,582	1877	1,364	158,844
1866	332	16,413	1878	893	122,812
1867	270	15,803	1879	....	....
1868	283	18,589	1880	182	39,408
1869	545	39,085	1881	1,605	328,203
1870	367	23,375	1882	2,240	353,093
1871	340	23,700	1883	209	31,381
1872	929	83,733	Total......	15,750	1,716,976
1873	1,272	101,587			

From a comparison of the above figures with those shown in the preceding table, it will be seen that during the years 1881 and 1882 this form of unconditional purchase was largely availed of to supplement the direct purchases at auction.

The lands claimed in virtue of a pre-emptive right, a form of alienation which was also abolished by the Crown Lands Act of 1884, added the following quota to the areas bought in the interests of the pastoralists :—

Year.	Lots.	Total Area sold.	Year.	Lots.	Total Area sold.
	No.	acres.		No.	acres.
1862	117	30,619	1874	....	....
1863	217	58,032	1875	....	....
1864	47	13,128	1876	780	189,664
1865	75	23,459	1877	367	81,193
1866	76	25,616	1878	15	4,063
1867	78	30,039	1879	25	6,033
1868	139	52,260	1880	30	6,912
1869	18	7,617	1881	35	7,461
1870	9	3,718	1882	29	5,183
1871	21	8,623	1883	23	2,338
1872	9	3,379			
1873	4	1,488	Total......	2,114	560,825

An examination of the figures in the tables just given shows that during the ten years from 1873 to 1882 the area alienated principally with the object of consolidating pastoral properties, and of securing them against the operations of conditional purchasers, amounted to 11,189,082 acres, made up as follows :—

Year.	By Auction Sales (Country Lots.)	Unconditionally sold by Selection.	Improved Lots sold to Owners of Improvements.	Sold by Pre-emption.	Total.
	acres.	acres.	acres.	acres.	acres.
1873	274,581	101,587	10,587	1,488	388,243
1874	580,753	98,850	20,546	....	700,149
1875	978,377	101,718	49,852	....	1,129,947
1876	1,685,650	95,681	86,099	189,664	2,057,094
1877	1,829,613	158,844	159,848	81,193	2,229,498
1878	861,049	122,812	224,841	4,063	1,212,765
1879	353,372	....	121,062	6,033	480,467
1880	346,679	39,408	237,646	6,912	630,645
1881	523,657	328,203	474,099	7,461	1,333,420
1882	503,547	353,093	165,031	5,183	1,026,854
Total...	7,937,278	1,400,196	1,549,611	301,997	11,189,082

The consolidation of pastoral estates did not suffer a serious check when the clauses of the Act of 1861, above cited, ceased to operate, as the transfer of conditional purchases supplied fresh means by the gradual absorption of a very large number of selections, principally in the Central and Western Divisions.

A comparison of the areas dealt with in the following table shows how fast the original conditional purchasers of Crown lands are dispossessing themselves of their holdings, whilst the area selected does not exhibit a tendency to increase at anything like the same rate. An examination of the table reveals the fact that since 1882 only, there have been 28,384,824 acres of conditional purchases transferred, as against 14,902,468 acres applied for—a difference of 13,482,356 acres, which have gone to increase the large estates, distinctly to the detriment of healthy settlement.

Year.	Selections.		Transfers.	
	Number.	Acreage.	Number.	Acreage.
1882	14,607	2,392,220	8,665	2,134,319
1883	10,725	1,621,948	6,213	1,508,583
1884	10,657	1,453,937	6,017	1,525,456
1885	5,372	1,114,871	9,079	2,286,730
1886	6,061	954,560	7,154	1,861,877
1887	4,478	723,151	7,440	2,159,429
1888	5,364	862,716	10,469	3,096,051
1889	4,686	740,964	10,741	2,327,562
1890	8,526	1,713,577	13,492	1,863,508
1891	6,149	1,306,534	16,727	2,333,808
1892	4,396	816,399	14,017	2,060,130
1893	3,393	533,805	12,581	1,825,097
1894	2,617	414,355	11,235	1,617,263
1895	1,751	253,431	11,517	1,785,011
Total............	88,782	14,902,468	145,347	28,384,824

It must be remembered, however, that a proportion of these transfers was made by way of mortgage, and therefore it is not possible to ascertain the area absolutely transferred by the original selectors. But if to the area parted with by its owners since 1882 be added the extent of land transferred during the previous twenty years, the fact that 20,919,276 acres out of the total area alienated are now contained in 679 holdings, giving to each one an average domain of 30,809 acres, is easily accounted for. The number of holdings, however, does not represent the number of owners interested, as in not a few cases these large estates are held in partnership by three or four persons, or by companies and financial corporations.

RURAL SETTLEMENT.

EXCLUDING land held by the tenants of the Crown, there were in New South Wales, at the end of March, 1896, 60,529 holdings of 1 acre and upwards in extent. Twenty years previously such holdings numbered 36,984. The increase in number amounted during the period to 64 per cent., while the area comprised in the holdings advanced from 13,525,497 to 42,321,926 acres, or 213 per cent. The average area of alienated holdings gradually rose from 366 acres in 1876 to 770 acres in 1883; between 1884 and 1892 this average increased very little, while in 1893 the figures took a downward movement, falling to 699 acres in 1896—the lowest average since 1881. This decline in the average area is due to the increase in the number of small holdings, the advance in this respect during the last four years being nearly as great as that made during the previous eight years. The following table gives the average for each year since 1876:—

Year ended 31 March.	Average size of Holding.	Year ended 31 March.	Average size of Holding.
	acres.		acres.
1876	366	1887	780
1877	459	1888	778
1878	482	1889	795
1879	567	1890	787
1880	569	1891	780
1881	691	1892	784
1882	753	1893	750
1883	770	1894	748
1884	770	1895	707
1885	762	1896	699
1886	778		

The increase shown between the first and last years of the above series is 333 acres, so that the average extent of holdings is nearly twice as large as in 1876. This is attributable mainly to the large area transferred to the larger estates by private purchase, and, during the earlier portion of the period, to the acquisitions by auction sale and improvement purchase, the influence of which has not been so marked since 1884.

Comparing the existing rural holdings of various sizes with those of the year 1880, it will be found that estates under 16 acres in extent have increased 163 per cent., while those from 16 to 200 acres in extent have advanced only 25 per cent. Between 201 and 400 acres in area the number of holdings shows an increase of 34 per cent.; those from 401 to 1,000 acres in area increased 50 per cent.; from 1,001 to 2,000 acres, 101 per cent.; from 2,001 to 10,000 acres, 118 per cent.; while in the largest class of holdings, those from 10,001 acres upwards, the increase in number has been 108 per cent. during the sixteen years. The subjoined table shows the number of holdings in different classes at various terms of the period named :—

Area.	Year ended 31st March.				
	1880.	1885.	1890.	1895.	1896.
Under 16 acres	4,974	5,409	7,290	12,301	13,101
16 to 200 acres	21,302	20,998	22,048	25,707	26,529
201 to 400 acres	6,199	6,363	6,774	8,299	8,315
401 to 1,000 acres.........	4,964	6,497	6,849	7,569	7,423
1,001 to 2,000 acres	1,212	1,886	2,191	2,475	2,436
2,001 to 10,000 acres ...	940	1,413	3,910	2,013	2,046
10,001 and upwards......	327	513	658	656	679
Total	39,918	43,079	49,720	59,020	60,529

The holdings under 16 acres in extent are, generally speaking, in the vicinity of towns, and consist mainly of gardens or orchards, and the increase of 163 per cent. is what would naturally be expected from the growing demand for their produce by a large urban population. The least satisfactory feature in the table is the fact that the number of holdings of moderate size does not greatly increase. In 1880 the holdings having an area from 16 to 400 acres numbered 27,501, while in 1896 they numbered 34,844, showing an advance of only 27 per cent. On the other hand, the larger holdings have increased in a remarkable degree: in April, 1896, there were 12,584 holdings of 401 acres and upwards in extent, compared with 7,443 in 1880, or an increase of 69 per cent. in number during that short period. The area of holdings, as returned by occupiers, in every fifth year since 1880, and in 1896, is given below :—

Year ended 31st March.	Total Area of Holdings.
	acres.
1880	22,721,603
1885	32,843,317
1890	37,497,889
1895	41,736,073
1896	42,321,926

The area of unenclosed land in 1877 amounted to more than one-third of the whole extent of the holdings; but in the beginning of 1896 the proportion had fallen to one-twenty-fourth, the area unenclosed at that period being only 1,749,286 acres out of a total of 42,321,926 acres occupied. This result is due partly to the operation of legislation, and partly to the saving of labour which fencing enables occupiers to effect.

METROPOLITAN DISTRICT.

For the purpose of an examination of the statistics showing the present state of the settlement of alienated land in New South Wales, it will be better to extend the inquiry successively to the various parts of the colony, as far as possible, in the order in which they were opened up, following the march of colonization, in each of the four zones of settlement into which the country may be said to be geographically divided, viz., the coast, the tableland, the western slope of the Great Dividing Range, and the western plains. Each zone, having its own special character, offers to the settler different natural resources according to its climatic conditions. Proceeding from the metropolis as a centre, settlement extended first along the coast, then to the central and more readily accessible parts of the tableland, following afterwards the course of the great inland rivers towards the southern and western parts of the colony; thence to the great plains of the west, spreading slowly across the River Darling to the confines of the territory. Nature assisted by legislation contributed to the shaping of settlement into its present form—the natural course of events, however, being at times interrupted by sudden rushes of population to points scattered over the surface of the country, even to its remotest extremities.

That part of the county of Cumberland which embraces the area of the metropolis and its suburbs is outside the limits of this examination, as it is not intended to inquire into the present condition of urban settlement; but it may be stated, nevertheless, that as regards the subdivision and the distribution of landed property in the city and suburbs of Sydney there is now little difference between this and much older communities. The figures given below refer only to rural settlement in the remaining portion of this county, where the first attempts to colonize were made. It will be seen from the table, in which these holdings are distributed into series of various areas, that there are five distinct classes of holders of alienated land, viz.:—(1) Persons who occupy their own freeholds; (2) persons occupying holdings which they rent from the freeholders; (3) owners of land who rent from other private owners lands which they work in addition to their own freeholds; (4) persons who, in addition to their freehold, rent from the Crown areas which are generally devoted to the depasturing of stock; and (5) persons who rent land belonging to private owners as well as land which belongs to the State; while there is a sixth class, which, however, has no representative in the Metropolitan district—comprising those who, in addition to working their freehold, are both Crown and private tenants:—

Police Districts of the County of Cumberland.	Occupiers of—						Area alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Metropolitan	1,484	1,121	55	..	1	2,661	28,207	14,562	42,769
Ryde	749	134	30	..	..	913	20,463	2,760	23,223
Parramatta	874	188	51	1	1	1,115	38,815	17,128	55,943
Liverpool	695	302	47	1	..	1,045	36,497	34,213	70,710
Camden (*part of*)	59	39	24	..	..	122	13,541	18,676	32,217
Campbelltown	212	119	39	6	..	376	27,738	22,878	50,616
Wollongong (*part of*)	56	18	7	2	..	83	8,891	2,053	10,944
Windsor (*part of*)	487	166	64	2	..	719	36,688	13,186	49,874
Penrith (*part of*)	697	238	69	..	..	1,004	59,100	58,223	117,323
Total	5,313	2,325	386	12	2	8,038	269,940	183,679	453,619

Thus, in this part of New South Wales, outside towns and purely suburban areas, 453,619 acres are alienated in holdings over 1 acre in extent. Of this area, 269,940 acres, or 59·51 per cent., are in the occupancy of the owners of the land; whilst 183,679 acres, or 40·49 per cent., are leased to tenant occupiers. There are 5,313 persons occupying their own freeholds, 2,325 tenants of private land, 386 persons who both own and rent from private persons portions of their holdings, 12 owners of freehold with Crown lands attached, and 2 persons who stand in the position of renting a portion of their holdings from private persons and a portion from the Crown. The area of alienated land enclosed in this district is 398,325 acres; and unenclosed, 55,294 acres. The area in cultivation is 40,967 acres. Persons working their own land cultivate 29,501 acres; and occupiers of private rented land, 11,466 acres.

From the number of rural landholders in the district it is clearly seen that the average area held by each cannot be very large. In the Police District of Camden it reaches 264 acres; in Campbelltown Police District, 135 acres; in Wollongong, 132; and in Penrith, 117 acres. In Windsor and in Liverpool the average is 69 and 68 respectively; in Parramatta, 50; while for Ryde it is only 25, and for the Metropolitan Police District only 16. The average area for the whole division is only 56 acres per holding.

The holdings in this division may be classified as follows :—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	5,951	48,241	10·63	15,809	32·77
31 to 400 acres	1,893	183,814	40·52	21,524	11·71
401 to 1,000 acres.........	130	81,747	18·03	1,976	2·42
1,001 acres and upwards	64	129,817	30·82	1,658	1·28
Total	8,038	453,619	100·00	40,967	9·03

There are 33 lessees of Crown lands occupying an area of 11,641 acres, 3,396 acres being held under conditional lease and 8,245 acres under other forms of tenure. The area enclosed is 5,695 acres, and unenclosed 5,946 acres; and there are under cultivation 543 acres, principally at the Hawkesbury Agricultural College and the Pitt Town Labour Settlement. The value of improvements on Crown lands in this district is returned at £3,592. The total area of alienated land and Crown lands occupied is 465,260 acres. Deducting the area cultivated—41,510 acres—it will be seen that the area used for grazing and dairying and other purposes is 423,750 acres.

The total area of the district is 1,006,720 acres. The figures regarding alienation given above do not include holdings under 1 acre, and as this division includes the metropolitan district, an addition of rather more than 200,000 acres must be made to the alienated area on this account, thus bringing the area up to 665,000 acres, so that the actual area of Crown lands unoccupied is not more than 340,000 acres, including much that is of no practical use.

HUNTER AND HAWKESBURY VALLEYS.

From the county of Cumberland colonization advanced westward, and the alluvial lands of the Hawkesbury and Nepean valleys were rapidly occupied and covered with prosperous farms. The progress of settlement was then deflected to the northward by the high range of abrupt mountains in the west which was so long a barrier to the advance of the settler in that direction. The lower portion of the valley of the river Hunter, abounding with natural resources, mineral as well as agricultural, soon attracted colonists, and at the present time more population is concentrated in this district than in any other part of New South Wales outside the metropolitan area. The following table indicates the actual state of rural settlement in the district comprising the Hunter and Hawkesbury Valleys:—

Counties.	Occupiers of—							Area alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Private Rented with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Durham	599	681	150	185	2	24	1,641	611,251	178,813	790,064
Hunter	141	51	25	36	..	6	259	122,385	15,983	138,368
Northumberland	1,560	1,077	251	37	2	4	2,931	353,381	167,785	521,166
Cook	789	201	120	51	5	13	1,179	128,102	39,011	167,113
Total	3,089	2,010	546	309	9	47	6,010	1,215,119	401,592	1,616,711

This division contains a total area of 5,310,080 acres, of which 1,616,711 acres, or 30·45 per cent., are alienated among 6,010 landholders, so that the average area of holdings in this part of the colony is 269 acres. Of the area thus alienated, 1,215,119 acres, or 75·16 per cent., are in the occupancy of the owners of the land; and 401,592 acres, or 24·84 per cent., are occupied by private tenants. In the farming counties of Durham and Northumberland the proportion of land held by freeholders is considerable, amounting respectively to 77·37 and 67·81 per cent. of the total area alienated in the county, and together to 59·66 per cent. of the total area alienated in the whole division. It will be seen on reference to the table that the proportion of land held by tenant occupiers is small compared with the total alienated area, only 24·84 per cent. being leasehold, of which 11·06 and 10·38 per cent. are in Durham and Northumberland respectively, while the rented portions of Hunter and Cook together only amount to 3·40 per cent.

The total number of occupiers is returned at 6,010 for the whole district. Of these, 3,089 occupy their own freeholds; 2,010 are private tenants; 546 rent various private areas in addition to their own land; 309 occupy, together with their freeholds, a certain area of Crown lands on lease; 9 occupy holdings a portion of which consists of private rented land and the other portion of Crown land; and 47 stand in the position of being the possessors of freehold with both private rented land and Crown lands. As before stated, the average area of holdings in this district is 269 acres, with a minimum of 142 acres in the county of Cook, and a maximum of 534 acres in that of Hunter. Durham comes next with 481 acres per holding; and the area is much lower in Northumberland, which has an average of 178 acres per holding. The area of alienated land enclosed is 1,471,645 acres; and unenclosed, 145,066 acres. There are 61,865 acres in cultivation—33,251 acres of land occupied by the owners, and 28,614 acres of private rented land. The classification of the holdings in this division will be found below. The average area of the large estates in the last series is 18,386 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	2,032	23,357	1·44	9,898	43·28
31 to 400 acres	3,304	397,594	24·59	41,478	10·43
401 to 1,000 acres	406	257,593	15·93	6,298	2·44
1,001 to 10,000 acres ..	253	662,378	40·98	3,659	0·55
10,000 acres and upwards	15	275,789	17·06	532	0·19
Total	6,010	1,616,711	100·00	61,865	3·83

The area of Crown lands occupied in this district is 257,537 acres, held by 403 lessees, 365 of whom have also alienated land. Of this area, 110,735 acres are held under conditional lease, and 146,802 acres under other forms of lease. The area enclosed is 184,989 acres; and unenclosed, 72,548 acres. Only 163 acres of Crown lands are cultivated, chiefly in the county of Cook. The value of improvements is returned at £42,456, or an average of about 3s. 4d. per acre occupied.

The area of alienated land in holdings over 1 acre in extent and of Crown lands in occupation is 1,874,248 acres; and deducting from this the area cultivated—62,018 acres—there remains an area of 1,812,230 acres used for grazing and dairying. The total area of the district embraced in this division being 5,310,080 acres, there remain unalienated and unoccupied about 3,400,000 acres of Crown lands, making allowance for small holdings under 1 acre not included in the figures given above.

SOUTH COAST DISTRICT.

In the earlier portion of the present century colonization took a southerly direction from the metropolis, and settlement extended rapidly along the lower valleys of the rivers of the South Coast, where the best lands were alienated in grants of large areas to a few families. Later on, however, the nature of the country and a more intelligent apprehension of the principles which should guide colonization brought about the subdivision of these large estates into numerous and comparatively small holdings, which are at present cultivated by a fairly prosperous tenantry. This is especially the case in the county of Camden. The average area of estates in Auckland and Dampier, owing to their distance from the metropolis, and perhaps also to the mountainous character of a considerable portion of the land within their boundaries, reaches 386 and 366 acres respectively; but as the metropolis is approached the average area of the holdings decreases to 249 acres in St. Vincent and 169 acres in Camden, the average for the whole district being 232 acres per holding.

In the South Coast district alienated rural lands are occupied in the manner illustrated in the following table :—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Private Rented with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Camden	1,688	1,459	446	77	2	12	3,684	376,466	246,764	623,230
St. Vincent	728	324	135	124	8	26	1,345	243,909	91,564	335,473
Dampier........	321	87	40	71	2	7	528	162,124	31,336	193,460
Auckland	533	182	108	57	4	8	892	283,026	61,387	344,413
Total......	3,270	2,052	729	329	16	53	6,449	1,065,525	431,051	1,496,576

The area of alienated land is shown to be 1,496,576 acres, or 28·75 per cent. of the total area—5,205,120 acres—of this portion of the colony; the extent of land occupied by the proprietors themselves being 1,065,525 acres, or 71·20 per cent.; and of that leased to tenant occupiers, 431,051 acres, or 28·80 per cent. of the area alienated. Ther are altogether in these counties 3,270 occupiers of their own freehol

2,052 tenants of private rented lands, 729 persons occupying both their own and leased private lands, 329 occupiers of freehold with Crown lands attached, 16 persons occupying private rented lands with Crown lands attached; and 53 persons whose holdings are partly their own, partly leased from private owners, and partly belonging to the Crown—a total of 6,449 occupiers. The area of alienated land enclosed is 1,326,749 acres, leaving 169,827 acres unenclosed. The area in cultivation is 40,704 acres, of which 24,281 acres represent land occupied by the owners, and 16,423 acres land held under private tenancy.

The holdings in this division may be classified as under. The average area of large estates over 10,000 acres in extent is 13,800 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area under Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	1,690	13,595	0·91	2,010	14·79
31 to 400 acres	3,935	586,240	39·17	27,751	4·73
401 to 1,000 acres	605	373,554	24·96	6,619	1·77
1,001 to 10,000 acres	214	453,787	30·32	3,915	0·86
10,001 acres and upwards	5	69,400	4·64	409	0·59
Total	6,449	1,496,576	100·00	40,704	2·72

The area of Crown lands occupied is 461,035 acres, 101,760 acres being held under conditional lease. The area enclosed is 110,832 acres; and unenclosed, 350,203 acres. The cultivated area is 166 acres—nearly all in the counties of St. Vincent and Auckland. The total number of lessees is 434, of whom 36 occupy Crown lands only; and the value of improvements on Crown lands is returned at £24,111, or an average of about 1s. 1d. per acre occupied. This average may seem low, but is accounted for by the fact that a large area is unenclosed, especially in county Auckland.

The area of alienated land and Crown lands occupied is 1,957,611 acres, and, deducting the 40,820 acres cultivated, there are 1,916,791 acres used for grazing and dairying and other purposes. The total area of the counties comprising this district being 5,205,120 acres, the area neither alienated nor under occupation, making allowance for alienated holdings under 1 acre in extent, which are not included above, will be about 3,100,000 acres.

NORTH COAST DISTRICT.

In the North Coast district the occupation of the country has extended rapidly, of late years, along the banks of the fine rivers which empty into the Pacific Ocean. Figures regarding alienated holdings in this district will be found below :—

Counties.	Occupiers of—							Area alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Private rented with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Rous	1,332	725	107	60	3	3	2,230	392,714	72,190	464,904
Richmond	296	133	19	48	..	3	499	224,575	17,671	242,246
Clarence........	742	600	102	67	9	17	1,537	152,373	55,219	207,592
Fitzroy	220	44	8	48	4	4	328	77,684	10,198	87,882
Raleigh	373	145	20	43	1	4	586	57,149	15,835	72,984
Dudley	238	267	59	55	5	9	633	87,506	40,960	128,466
Macquarie	806	503	97	82	1	7	1,496	216,276	78,368	294,644
Gloucester	678	275	110	147	10	16	1,236	343,501	265,880	609,381
Total	4,685	2,692	522	550	33	63	8,545	1,551,778	556,321	2,108,099

Of all the districts of New South Wales, the North Coast counties exhibit the best and most satisfactory results as regards settlement. Nowhere has the great object of the Act of 1861—to place an industrious farming population on the soil—been better fulfilled. The total number of land-holders is 8,545, of whom only 2,692 are private tenants, and 33 rent Crown lands in addition to lands owned by private persons; while 4,685 occupy their own freeholds; 522 work both their own land and additional areas rented from private owners; 550 occupy areas of Crown lands together with their freeholds; and 63 add to their own lands areas leased from private persons and also from the State. The total area alienated in this rich part of the colony amounts to 2,108,099 acres, or only 23·65 per cent. of the total extent of the district, which covers 8,913,640 acres; and the average area of holdings is 247 acres, ranging from 125 acres in Raleigh to 485 acres in Richmond and 493 in Gloucester. The proportion of leasehold lands to the area alienated is comparatively small, there being only 556,321 acres so held, or 26·39 per cent. of the total alienated area; whilst 1,551,778 acres, or 73·61 per cent., are in the occupancy of the owners of the land themselves. In the counties of Richmond and Fitzroy the area leased by private persons forms only 7·29 and 11·60 per cent. respectively of the area alienated; and the maximum is reached in Gloucester, where 43·63 per cent. of the settled rural land is occupied by tenants.

The area enclosed is 1,459,645 acres, or about 69·24 per cent. of the total; and the area unenclosed is 648,454 acres. The extent of land in cultivation is 143,088 acres, of which 84,758 acres are [illegible] the owners, and 58,330 acres by private tenan[illegible]

The holdings in this division may be classified as under. The average area of large estates of over 10,000 acres in extent is 26,766 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	1,309	16,434	0·78	8,151	49·60
31 to 400 acres	6,414	777,491	36·88	115,398	14·84
401 to 1,000 acres	609	371,152	17·61	13,594	3·66
1,001 to 10,000 acres	194	434,459	20·61	5,618	1·29
10,001 acres and upwards	19	508,563	24·12	327	0·06
Total	8,545	2,108,099	100·00	143,088	6·79

The area of Crown lands occupied is 1,452,687 acres, held by lessees to the number of 758, of whom 646 occupy Crown lands in conjunction with alienated holdings, and 112 occupy Crown lands only. The area under conditional lease is 195,972 acres; and under all other forms of lease, 1,256,715 acres. The extent of Crown lands enclosed is 781,485 acres; and unenclosed, 671,202 acres. The area cultivated is 1,487 acres; and the value of improvements is returned as £67,184, or about 11d. per acre occupied, this small average being accounted for by the fact that so large an area remains unenclosed.

The area of alienated land and Crown lands occupied is 3,560,786 acres, and deducting from this the area cultivated—144,575 acres—there remains an area of 3,416,211 acres used for grazing and dairying and other purposes. The total area of the division being 8,913,640 acres, the area unalienated and unoccupied, making allowance for alienated holdings under 1 acre, which are not included above, will be about 5,200,000 acres, a large portion of which is, however, unfit for settlement.

From the foregoing a fairly clear idea may be obtained of the present state of rural settlement in the valleys of the coastal rivers, and in the country extending from the sea to the first slopes of the Great Dividing Range. Geographical features and climate are the main elements in determining the occupation of the soil, irrespective of administrative boundaries. In this part of the colony the settlement of the public lands has proceeded in a way very different from that of the tableland, which extends from north to south, and divides the rich agricultural valleys of the coastal rivers and their broken mountainous watershed from the immense plains of the western district.

CENTRAL TABLELAND.

After the difficulties between the coast and the interior had been overcome, the pioneers of colonization penetrated to the central tableland, thence extending to the south and the north, and afterwards gradually spreading over the whole of the great western interior. At first they followed the course of the great rivers, and occupied, little by little, all the available land, until at the present time only very inferior country remains untenanted.

The central tableland, comprising the counties grouped around the cities of Bathurst, Orange, and Mudgee, was the first settled, and the occupation of the alienated lands at the present time is illustrated by the figures given in the following table :—

Counties.	Occupiers of—							Area alienated		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown lands attached.	Private Rented with Crown lands attached.	Partly Freehold, partly Private Rented, and partly Crown lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Brisbane	461	103	51	199	2	10	826	819,558	39,288	858,846
Phillip..........	357	114	26	150	3	17	667	256,796	25,761	282,557
Bligh	103	13	5	246	2	18	387	433,132	58,412	491,544
Lincoln	215	60	27	181	2	8	493	241,800	22,127	263,927
Gordon	183	40	12	200	4	7	446	329,073	13,754	342,827
Wellington	524	256	62	249	6	19	1,116	344,657	38,151	382,808
Roxburgh	338	153	50	156	13	32	742	193,110	102,407	295,517
Ashburnham ..	971	118	37	264	4	22	1,416	603,094	52,799	655,893
Bathurst	782	555	146	140	6	37	1,666	585,111	155,456	740,567
Westmoreland ..	231	88	30	208	12	35	604	163,817	51,903	215,720
Total	4,165	1,500	446	1,993	54	205	8,363	3,970,148	560,058	4,530,206

From the foregoing table it will be seen that the number of holders of rural lands in this part of the colony is 8,363, of whom 4,165 occupy their own freeholds; 1,500 are private tenants; 446 lease lands from private owners in addition to their own freeholds; 1,993 persons occupy areas of Crown lands, generally for grazing purposes, in addition to their own freeholds; 54 rent both private and Crown lands; and 205 are tenants both of private parties and the Crown, as well as possessing land of their own. The area alienated is 4,530,206 acres, representing 38·89 per cent. of the whole area of the district, which is computed at 11,649,280 acres. The proportion of land occupied by the landowners themselves is 87·64 per cent., or 3,970,148 acres; whilst 560,058 acres are leased to tenant occupiers. In the county of Roxburgh the proportion of land leased is considerable, 102,407 acres out of 295,517 acres alienated in this county, or 34·65 per cent., being held by tenants; and in Westmoreland and Bathurst 51,903 acres and 155,456 acres respectively, or 24·06 and 20·99 per cent., are held in the same manner. The proportion in the remaining counties gradually diminishes from 11·88 per cent. in Bligh and 9·97 per cent. in Wellington to 4·57 per cent. in Bri[illegible], and 4·01 per cent. in Gordon, where the countr[illegible] thickly [illegible] and is occupied principally for grazing purposes. In the central tableland are situated some of the finest freehold estates in New South Wales, the land having remained in the hands of the original grantees or their descendants, who consolidated their holdings by taking advantage on a large scale of the auction sale and improvement clauses of the Land Act of 1861.

The average area of holdings in this division is 542 acres, ranging from a maximum of 1,270 acres in Bligh and 1,040 acres in Brisbane, owing to the cause just mentioned, to a minimum of 343 acres in Wellington. The total area of alienated land enclosed is 4,431,363 acres, or 97·82 per cent.; the area unenclosed being only 98,843 acres. The area cultivated is 235,123 acres—176,818 acres being land worked by the owners, and 58,305 acres by tenants.

The holdings in this division may be classified as under. The average area of large estates over 10,000 acres in extent is 22,383 acres :—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	1,627	12,425	0·27	4,197	33·78
31 to 400 acres	4,928	814,582	17·98	120,336	14·77
401 to 1,000 acres.........	1,197	749,525	16·55	63,274	8·44
1001 to 10,000 acres......	542	1,409,269	31·11	40,578	2·88
10,001 acres and upwards	69	1,544,405	34·09	6,738	0·44
Total	8,363	4,530,206	100·00	235,123	5·19

The area of Crown lands occupied on the central tableland is 4,147,520 acres, of which 1,290,707 acres are held under conditional lease, and 3,105 acres under settlement lease. There are 3,611,899 acres enclosed, and 535,621 acres unenclosed. The number of lessees is 2,407, of whom 2,252 occupy Crown lands in addition to alienated holdings, and 155 occupy Crown lands only. The area cultivated is 2,026 acres, and the value of improvements is returned at £410,889—an average of about 2s. per acre occupied.

The area of alienated land and Crown lands occupied is 8,677,726 acres; and deducting from this the area in cultivation—237,149 acres—there remain 8,440,577 acres used for grazing and dairying and other purposes. The total area of the counties comprised in the district being 11,649,280 acres, the area neither alienated nor occupied, allowing for alienated holdings under 1 acre in extent, which are not included in the foregoing figures, will be about 2,850,000 acres.

SOUTHERN TABLELAND.

The conditions of settlement in the southern tableland do not greatly differ from those which obtain in the central district, the principal feature being the greater proportion of holdings occupied by their proprietors. The following table illustrates the state of settlement in the various counties which comprise this portion of the colony:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented, with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Forbes	263	29	20	140	3	7	462	395,776	16,539	412,315
Monteagle	565	60	40	137	3	12	817	530,945	20,946	551,891
Harden	547	111	62	103	3	11	837	753,422	62,380	815,802
King	480	103	52	342	7	41	1,025	558,804	48,773	607,577
Georgiana	232	85	28	266	7	39	657	303,654	60,290	363,944
Argyle..........	576	235	127	202	9	39	1,188	477,037	167,936	644,973
Murray	453	147	82	176	4	45	907	742,213	87,770	829,983
Cowley	26	5	5	71	..	9	116	98,655	17,072	115,727
Buccleuch	126	90	9	76	1	4	306	195,605	9,173	204,778
Clarendon	350	135	63	41	1	5	595	557,329	58,819	616,148
Wynyard	548	182	50	95	6	14	895	518,050	47,726	565,776
Goulburn	329	78	34	62	2	9	514	535,677	49,028	584,705
Selwyn	138	23	11	76	3	1	252	222,942	11,513	234,455
Wallace	128	17	13	220	1	9	388	400,260	8,688	408,948
Beresford	202	48	20	118	1	13	402	388,978	11,172	400,150
Wellesley	282	55	21	117	2	12	489	514,926	22,052	536,978
Total	5,245	1,403	637	2,242	53	270	9,850	7,194,273	699,877	7,894,150

Thus the land alienated in this part of the colony comprises 7,894,150 acres, or 47·11 per cent. of the whole of its area, which contains 16,755,200 acres. Of this extent of land, only 699,877 acres, or 8·87 per cent. of the settled lands, are held in tenancy; whilst 7,194,273 acres, or 91·13 per cent., are occupied by the landowners themselves. The percentage of land held in tenancy is greatest in the counties of Argyle and Georgiana, where it is 26·04 and 16·57 respectively. There are 14·75 per cent. in Cowley county, 10·57 in Murray, 9·55 in Clarendon, 8·44 in Wynyard, 8·39 in Goulburn, and 8·03 in King. In the other counties the proportion dwindles from 7·65 per cent. in Harden to a minimum of 2·12 per cent. in the southern county of Wallace.

In the whole of this district the total number of occupiers is 9,850, of whom 5,245 occupy their own freeholds; 1,403 are private tenants; 637 occupy both descriptions of alienated lands; 2,242 occupy areas of Crown lands in addition to their freeholds; 53 occupy private rented lands with Crown lands attached; and 270 persons who possess freeholds also rent land from private owners and from the Crown. The conditions of settlement in which pastoral occupation is the leading feature must necessarily greatly affect the average extent of rural holdings, and in this division it will be found to attain fairly high proportions, 801 acres being the average throughout, with a maximum of 1,138 acres in Goulburn, and a minimum of 543 acres in Argyle. The area of alienated land enclosed is 7,778,298 acres; and unenclosed, 115,852 acres. The total extent in cultivation is 250,375 acres, viz., 193,282 acres worked by owners, and 57,093 acres by tenants. This is small in proportion to the area of the district; but it is on the large estates of the southern tableland that there has been the most notable increase in cultivation. The area cultivated on estates over 10,000 acres in extent, viz., 24,807 acres, is 115 per cent. higher than that of three years ago, when it stood at 11,542 acres. The advance has taken place in every county in the district, but the county of Monteagle shows an increase in the area cultivated on these large holdings from 1,011 acres in the year 1892-3 to 3,866 acres in 1893-4, 11,059 acres in 1894-5, and 11,616 acres in 1895-6. The average area of large estates over 10,000 acres in extent is 20,934. The holdings in this division may be classified as under:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	1,866	15,638	0·20	3,951	25·27
31 to 400 acres	5,158	862,664	10·93	82,571	9·57
401 to 1,000 acres.........	1,496	969,358	12·28	61,954	6·39
1,001 to 10,000 acres ...	1,196	3,241,367	41·06	77,092	2·38
10,001 acres and upwards	134	2,805,123	35·53	24,807	0·88
Total...............	9,850	7,894,150	100·00	250,375	3·17

The area of Crown lands occupied in the counties of the southern tableland is 4,188,065 acres, of which there are under conditional lease 1,575,834 acres. The area enclosed is 3,237,907 acres, and unenclosed 950,158 acres. The total number of lessees is 2,717, of whom 2,565 hold alienated lands also, and 152 occupy Crown lands only. The area cultivated on Crown lands is very small—only 625 acres. The value of improvements is returned at £443,788, or an average of about 2s. 1d. per acre occupied.

The area of alienated land and Crown land occupied is 12,082,215 acres, and deducting the area cultivated, 251,000 acres, there remain 11,831,215 acres devoted to grazing and dairying. The total area of the district is 16,755,200 acres, and making allowance for alienated holdings under 1 acre in extent, which are not included in the foregoing, there are left neither alienated nor occupied about 4,500,000 acres, which, of course, include land that is of no practical use.

NORTHERN TABLELAND.

In the northern tableland the disproportion between freeholders and tenants is strongly marked, the latter forming a very small minority of the occupiers of alienated lands, owing to the same causes which operate both in the south and in the centre of this great section of the colony. It is evident that the object of the Land Act of 1861 to create a class of independent settlers has been fairly successful, notwithstanding the fact that the number of actual occupiers is small compared with that of the individual selectors who, since the year 1861, have applied for conditional purchases. The following figures illustrate the state of settlement in the part of the country in question:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Parry	215	71	29	94	4	14	427	476,476	20,979	497,455
Buckland	234	27	20	71	1	13	366	692,107	17,640	709,747
Vernon	121	26	3	110	1	5	266	274,100	10,387	284,487
Inglis	149	28	14	140	..	6	337	146,083	9,274	155,357
Darling	93	38	7	219	2	12	371	265,895	20,318	286,213
Sandon	506	111	38	120	3	5	783	473,533	27,899	501,432
Clarke	67	..	1	135	..	..	203	164,302	7,154	171,456
Hardinge	109	22	2	194	2	4	333	243,450	17,254	260,704
Clive	302	40	15	114	1	1	473	129,473	2,082	131,555
Hawes	4	..	..	79	..	2	85	81,720	4,960	86,680
Gresham........	11	..	1	6	1	..	19	20,145	200	20,345
Gough	392	113	43	165	2	18	733	505,574	39,039	544,613
Arawatta	162	18	32	44	..	1	257	261,808	14,441	276,249
Drake	20	5	..	28	1	2	56	117,350	1,198	118,548
Buller	71	11	1	52	1	2	138	55,282	2,982	58,264
Total......	2,456	510	206	1,571	19	85	4,847	3,907,298	195,807	4,103,105

The total area alienated in this district is 4,103,105 acres, or 28·02 per cent. of the whole extent of 14,643,200 acres. The total number of occupiers of rural settled lands is 4,847, of whom 2,456 live on their freeholds; 510 are tenants of private lands; 206 rent private lands in addition to possessing freehold land; 1,571 occupy Crown lands in addition to their freeholds; 19 occupy private rented lands with Crown lands attached; and 85 persons who possess freeholds are also tenants of the Crown and of private landowners. The proportion of the area occupied by private tenants is 195,807 acres, or 4·77 per cent. of the whole extent of alienated land; whilst 95·23 per cent., representing 3,907,298 acres, is occupied by the landowners themselves. The land is used both for agricultural and pastoral purposes, and these indus[illegible] are generally carried on conjointly. The average area of holdings in the district is 847 acres, ranging from 278 acres per holding in Clive to 2,117 acres in Drake. The average in the county of Buckland is 1,939 acres; but in the districts surrounding the towns of Glen Innes and Inverell a large decrease is experienced, the average area of the holdings being only 743 and 783 acres in Gough and Hardinge respectively. The area of alienated land enclosed is 3,871,012 acres; and unenclosed, 232,093 acres. There are 90,138 acres cultivated—that is, about 2·20 per cent. of the alienated area—78,295 acres being land tilled by the proprietors, and 11,843 by tenants. The average area of large estates over 10,000 acres in extent is 27,166 acres. The holdings in this division may be classified as under:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	825	6,111	0·15	2,376	38·88
31 to 400 acres	2,852	492,909	12·01	49,132	9·97
401 to 1,000 acres	688	449,696	10·96	20,616	4·85
1,001 to 10,000 acres ...	406	1,089,778	26·56	14,542	1·33
10,001 acres and upwards	76	2,064,611	50·32	3,472	0·17
Total...........	4,847	4,103,105	100·00	90,138	2·20

There are 6,262,649 acres of Crown lands occupied in this division, 1,509,936 acres of which are held under conditional lease, and 1,964 acres under settlement lease. The area of Crown lands enclosed is 3,420,576 acres; and unenclosed, 2,842,073 acres. The value of improvements is returned at £326,249—an average of 1s. 1d. per acre occupied, the unenclosed area being very large. Only a very small area, 301 acres, is under cultivation. The total area of alienated lands and Crown lands held under lease is 10,365,754 acres, and deducting from this the area cultivated—90,439 acres—it will be seen that the area devoted to grazing and dairying is 10,275,315 acres. The total area of the district is 14,643,200 acres, and making allowance for alienated land in holdings under an acre in extent, which are not included in the foregoing, there remains neither alienated nor under occupation an area of about 4,150,000 acres.

SOUTH-WESTERN SLOPE.

The districts situated on the western slope of the Great Dividing Range mark the transition between the agricultural settlements of the coast and tableland and the purely pastoral settlements of the great western region. The extent of arable land in the division is very considerable, but in proportion to the total area of holdings little is devoted to cultivation, as it is more advantageous at present to use the land for grazing purposes, the great distance to the markets being the principal obstacle to a rapid expansion of agriculture on the tableland. Notwithstanding this, however, a considerable impetus has been given to agriculture during the last two years, some of the most notable increases having taken place in this district.

It will be noticed that the proportion of land alienated considerably diminishes as the districts on the western slope are reached, except in those parts where the excellence of the land for grazing purposes, and even for agriculture, impelled the pastoral tenants of the Crown some years ago to secure their holdings from the incursions of the free selector—whom the Act ostensibly intended to favour—by means of systematic purchases under the auction sale and improvement clauses of the Land Act of 1861. In the south-western districts, which are traversed by the principal permanent rivers of western New South Wales, the land has been alienated in a wholesale fashion, and immense areas of freehold land are in the hands of a very small number of landholders; while in the north-western districts the freehold estates are neither so numerous nor of such an enormous extent as those in the south. The state of settlement in the counties situated in the southern part of the western slope of the Great Dividing Range may be gathered from the following figures:—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Dowling	22	4	1	55	..	2	84	119,846	2,874	122,720
Gipps	32	10	1	160	..	9	212	526,837	11,360	538,197
Bland	346	35	20	235	8	22	666	603,957	40,844	644,801
Bourke	300	78	24	88	2	5	497	519,881	49,492	569,373
Cooper	47	16	3	87	1	5	159	548,206	23,733	571,939
Nicholson	29	7	2	42	1	4	85	298,499	17,163	315,662
Sturt	20	3	3	21	..	..	47	578,827	1,865	580,692
Waradgery	27	11	..	85	2	10	135	849,813	24,801	874,614
Boyd	39	4	6	8	..	..	57	636,452	9,420	645,872
Mitchell	144	54	23	31	1	8	261	620,963	40,931	661,894
Urana	203	18	14	31	..	4	270	1,510,856	22,001	1,532,857
Townsend	122	30	13	33	1	1	200	1,600,871	36,614	1,637,485
Wakool	93	2	3	65	..	4	167	1,164,065	12,203	1,176,268
Cadell	167	27	21	4	..	..	219	485,707	13,176	498,883
Denison	181	105	36	16	..	1	339	549,234	60,760	609,994
Hume	309	81	44	15	2	2	453	718,349	54,755	773,104
Total	2,081	485	214	976	18	77	3,851	11,332,363	421,992	11,754,355

The total area of this district, commonly called Riverina, is computed at 22,273,360 acres, of which 11,754,355 acres are now alienated, or 52·77 per cent. of the whole area. In some of the counties, however, a greater proportion of the land has been parted with; thus in Mitchell 80·18 per cent. is alienated, or 661,894 acres out of a total of 825,600 acres. This county is closely followed by Denison, with 77·36 per cent., or 609,994 acres out of 788,480 acres; Urana, with 76·66 per cent., or 1,532,857 acres out of 1,999,080 acres; Cadell, with 74·74 per cent., or 498,883 acres out of 667,520 acres; Hume, with 72·59 per cent., or 773,103 acres out of 1,064,960 acres; Townsend, with 70·13 per cent., or 1,637,485 acres out of 2,335,080 acres; Boyd, with 64·48 per cent., or 645,872 acres out of 1,001,600 acres; Wakool, with 61·88 per cent., or 1,176,268 acres out of 1,900,800 acres; and Sturt, with 60·01 per cent., or 580,692 acres out of 967,680 acres. The counties of Waradgery, Bland, Bourke, and Gipps have respectively 49 per cent., 41·65 per cent., 38·68 per cent., and 34·35 per cent. of their total areas alienated, while in Cooper 32·47 per cent. is alienated; but in the county of Nicholson the percentage is only 22·36, and in Dowling only 10·42. The percentage of land held by tenants is very small, ranging from less than 0·32 per cent. in Sturt to 9·95 in Denison, the percentage for the whole district being only 3·59.

The number of holders of rural lands in the Riverina district is 3,851, of whom 2,081 occupy their own freeholds; only 485 are private tenants alone; 214 rent private lands in addition to their freeholds; 976 persons occupy areas of Crown lands, generally for grazing purposes, in addition to their own freeholds; 18 persons occupy private rented lands with Crown lands attached; and 77 persons who possess freeholds also rent land from the Crown and from private owners.

As might be expected, the average area of holdings is high in these districts, where the auction and improvement clauses of the Crown Lands Act of 1861 were extensively brought into operation for the purpose of consolidating holdings and preventing the land from falling into the hands of the free selectors, whom the great pastoral lessees did not look upon as desirable neighbours. The land was, indeed, bought up wholesale, the pastoralists being greatly helped by the various banking corporations, and their joint operations resulted in the alienation of immense areas of the best pastoral land in the colony. The average area of holdings for the whole district is 3,052 acres; but in the county of Sturt it reaches 12,355 acres; in Boyd, 11,331 acres; in Townsend, 8,187 acres; in Wakool, 7,044 acres; and in Waradgery, 6,478 acres, diminishing from 5,677 in Urana to 968 acres in Bland.

Practically the whole of the alienated land in this district is enclosed, only 34,935 acres out of a total area of 11,754,355 acres being open. The area under cultivation is 412,736 acres, of which

334,217 acres represent land worked by proprietors, while 78,519 acres are worked by tenants. The holdings in this division are thus distributed :—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	320	2,577	0·02	638	24·76
31 to 400 acres	1,489	312,240	2·66	80,502	25·78
401 to 1,000 acres.........	1,034	662,625	5·64	104,022	15·70
1,001 to 10,000 acres ...	815	2,128,207	18·11	157,270	7·39
10,001 acres and upwards	193	8,648,706	73·57	70,304	0·81
Total...............	3,851	11,754,355	100·00	412,736	3·51

The average area of estates over 10,000 acres in extent is 44,812 acres. The area cultivated on these large holdings is small in comparison with their total extent, but it is nevertheless nearly three times as much as it was three years ago, the same tendency being observable in this district as has been referred to in the southern tableland.

The total area of Crown lands occupied on the South-Western slope is 7,946,340 acres, only 203,884 acres of which remain unfenced. The area held under conditional lease is 1,772,950 acres, and under settlement lease, 64,896 acres. In cultivation there are 8,074 acres, of which over 5,209 acres are in the counties of Bland, Bourke, and Cooper. The value of improvements is returned at £1,143,066, or an average of about 2s. 11d. per acre. The number of lessees is 1,146, of whom 1,071 occupy Crown lands attached to alienated holdings, and 75 occupy Crown lands only.

The area of alienated lands and Crown lands occupied is 19,700,695 acres, and deducting from this the cultivated area—420,810 acres—the area devoted to grazing and dairying is 19,279,885 acres. The total area of the district is 22,273,360 acres; so that, allowing for alienation in holdings under 1 acre in area, there are not more than about 2,480,000 acres unalienated and unoccupied.

WESTERN-CENTRAL SLOPE.

The condition of settlement in regard to the lands on the central westward slope is illustrated by the following table :—

Counties.	Occupiers of—							Area alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Gregory	11	6	1	84	2	22	126	559,552	92,374	651,926
Ewenmar	35	9	4	134	2	12	196	290,315	9,887	300,292
Canbelego	6	2	..	35	1	1	45	33,832	1,292	35,124
Oxley	53	15	3	65	2	5	143	172,053	9,124	181,177
Narromine	86	16	2	113	1	6	224	196,708	18,999	215,707
Flinders	1	4	1	46	3	1	56	47,286	8,187	55,473
Kennedy........	8	3	1	114	2	6	134	160,802	10,130	170,932
Cunningham	49	15	6	146	..	3	219	285,482	8,773	294,255
Total	249	70	18	737	13	56	1,143	1,746,030	158,766	1,904,796

The total area alienated amounts to 1,904,796 acres, or 16·93 per cent. of the total area of the district, which is estimated at 11,228,520 acres. The greatest area alienated is in the county of Gregory, where there are 651,926 acres, or 33·18 per cent. of the total area, held by settlers. The percentage of alienated land in Ewenmar is 22·84; in Oxley, 21·33; and in Cunningham, 19·20; in Narromine 18·65 per cent. and in Kennedy 11·65 per cent. has been parted with; but in Flinders the proportion is only 3·59 per cent., and in Canbelego 2·51 per cent. The land is almost entirely devoted to pastoral pursuits, there being only 24,314 acres under cultivation, of which 18,757 acres, or 77·14 per cent., are in the counties of Narromine, Kennedy, and Cunningham. Only 1,450 acres are cultivated by tenants. Although the area occupied by tenants is proportionately larger than is the case farther south, there are only 158,766 acres so held, the proprietors occupying 1,746,030 acres out of the 1,904,796 acres of alienated land which the district contains. The proportion held by tenants ranges from 14·76 per cent. in Flinders and 14·17 per cent. in Gregory to 2·98 per cent. in Cunningham, giving an average of 8·34 per cent. for the whole district. The area of alienated land enclosed is 1,888,363 acres, and only 16,433 acres are unenclosed.

As a result of the small number of settlers in such an extensive district, the average area of holdings is necessarily fairly large, although it does not attain to such proportions as in the south, the average of this division being 1,666 acres, with a maximum of 5,174 acres in Gregory and a minimum of 781 acres in Canbelego.

The holdings in this division may be thus classified. The average area of large estates over 10,000 acres in extent is 24,410 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	117	1,110	0·06	186	16·76
31 to 400 acres	363	69,727	3·66	5,130	7·35
401 to 1,000 acres	390	245,995	12·91	7,740	3·15
1,001 to 10,000 acres ...	235	660,376	34·67	8,864	1·34
10,001 acres and upwards	38	927,588	48·70	2,394	0·26
Total	1,143	1,904,796	100·00	24,314	1·28

The area of Crown lands occupied in this district is 8,202,203 acres, of which 8,050,206 acres are enclosed. The area under conditional lease is 2,381,584 acres, and under settlement lease 36,452 acres; and there are 85,969 acres under homestead lease in the county of Canbelego. The area under cultivation is only 3,444 acres; and the value of improvements on Crown lands is £910,664, or an average of about 2s. 3d. per acre occupied. There are 843 lessees, of whom 806 also have alienated estates, and 37 occupy Crown lands only.

The total area of alienated lands and Crown lands occupied is 10,106,999 acres, of which 10,079,241 acres are devoted to the pastoral and dairying industry. The total area embraced in the counties comprising the western-central district is 11,228,520 acres, and making allowance for alienated estates under 1 acre in extent, which are not included in the foregoing, there remains neither alienated nor under lease an area of not more than 1,090,000 acres.

North-Western Slope.

In the northern portion of the western slope of the Dividing Range, the distribution of settlement closely resembles that met with in the division just examined, as the following table shows :—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold with Crown Lands attached.	Private Rented with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Stapylton	19	3	3	64	..	11	100	188,805	24,491	213,296
Burnett	59	14	4	109	..	7	193	337,819	12,277	350,096
Courallie	48	9	6	56	1	6	126	563,189	8,907	572,096
Benarba	10	1	1	150	1	11	174	292,912	24,722	317,634
Murchison	117	31	16	97	3	8	272	180,985	30,014	210,999
Nandewar	105	15	2	56	1	2	181	210,722	9,584	220,306
Jamison	24	7	3	104	..	6	144	412,656	8,712	421,368
Denham	7	3	..	97	..	4	111	201,417	10,122	211,539
Leichhardt......	32	16	5	186	1	6	246	599,114	31,171	630,285
Baradine........	39	7	1	69	1	4	121	119,611	2,973	122,584
White	70	7	3	14	..	1	95	36,079	6,301	42,380
Pottinger	145	21	8	111	..	11	296	867,361	29,650	897,011
Napier..........	19	7	2	34	1	3	66	160,286	15,128	175,414
Gowen..........	72	24	6	124	5	10	241	156,392	6,351	162,743
Total	766	165	60	1,271	14	90	2,366	4,327,348	220,403	4,547,751

The area alienated is 4,547,751 acres, or 23·74 per cent. of the total area, which is 19,157,800 acres. The highest proportion of alienated land is in Pottinger, around Gunnedah, where 897,011 acres, or 49·72 per cent. of the total area of the county, calculated at 1,804,120 acres, have been alienated, the greater portion to the pastoralists, who have succeeded in preventing the settlement of an agricultural class on the best portion of the famed Liverpool Plains. The competition between the pastoralists and the selectors was not so keen in the north-western district as it was in the central, and more particularly in the south-western division, presumably because the land, though equally good in quality, is too distant from the markets, and the country is more exposed to extreme climatic influences in the northern parts. The average area of holdings throughout the district, though higher than in the central-western district, is not so large as the average in the south-west, reaching 1,922 acres, with a maximum of 4,540 acres in Courallie, owing to causes explained above, and a minimum of 446 acres in White. The district, with the exception of its eastern portion, abutting on the boundary of the tableland of New England, is entirely devoted to the depasturing of stock. There are 329 tenant occupiers, renting 220,403 acres, the balance of the alienated area—4,327,348 acres—being occupied by 2,1 proprietors. The total number of holdings is 2,366, of which 766 are freehold, 165 private rented properties, 60 partly freehold and partly private rented lands, 1,271 freeholds to which have been added Crown lands, 14 private rented lands with Crown lands attached, and 90 partly freehold and partly private rented and Crown lands.

The proportion of land held by tenant occupiers is not large, amounting only to 4·85 per cent. for the district. In White, however, it reaches 14·87 per cent.; in Benarba, 14·22 per cent.; in Stapylton, 11·48 per cent.; in Napier, 8·62 per cent.; and in Courallie, 7·78 per cent.; but the proportion is very small everywhere else. The greater part of the alienated land in the district is enclosed, only 93,941 acres out of a total of 4,547,751 acres remaining open. The area cultivated is 19,217 acres, 17,085 acres being tilled by proprietors and 2,132 acres by tenants.

The holdings in this division may be classified as follow. The average area of large estates over 10,000 acres in extent is 30,518 acres:—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent
1 to 30 acres	225	1,755	0·04	422	24·05
31 to 400 acres	956	159,085	3·50	8,869	5·58
401 to 1,000 acres	688	444,645	9·78	4,637	1·04
1,001 to 10,000 acres	405	1,134,594	24·95	3,911	0·34
10,001 acres and upwards	92	2,807,672	61·73	1,378	0·05
Total	2,366	4,547,751	100·00	19,217	0·42

In the north-western district there are under lease 10,351,490 acres of Crown lands, 9,517,453 acres being enclosed and 834,037 acres open. The total area under conditional lease is 2,654,232 acres, and there are 65,131 acres under settlement lease. There is no cultivation to speak of, the entire area under crop being only 407 acres. The value of improvements on Crown lands is returned at £754,441, or about 1s. 6d. per acre. There are 1,444 lessees, 1,375 occupying Crown lands in addition to their alienated holdings, and 69 occupying Crown lands only.

The area of alienated lands and Crown lands occupied is 14,899,241 acres, and deducting the area cultivated, 19,624 acres, there remain 14,879,617 acres devoted to the pastoral and dairying industries—chiefly, of course, the former. The total area of the counties comprising this division being 19,157,800 acres, the area remaining unalienated and unoccupied by lease, allowing for alienation in holdings under 1 acre in extent, which are not included in the figures given above, will not be more than about 4,200,000 acres.

THE WESTERN PLAINS.

In the extreme west of the colony settlement is making but slow progress. With the excepti[illegible] great mining centre of Broken

Hill, situated on the boundary of the neighbouring colony of South Australia, around which a large population has settled within the last few years, the whole of this vast portion of the domain of New South Wales is given up to the depasturing of stock. Sheep-breeding is practically the only industry, the general character of the country militating against the successful rearing of cattle. The present state of settlement on the western plains is illustrated by the figures given below :—

Counties.	Occupiers of—							Area Alienated.		
	Freehold.	Private Rented.	Partly Freehold and partly Private Rented.	Freehold, with Crown Lands attached.	Private Rented, with Crown Lands attached.	Partly Freehold, partly Private Rented, and partly Crown Lands.	Total.	Freehold.	Private Rented.	Total.
	No.	No.	No.	No.	No.	No.	No.	acres.	acres.	acres.
Finch	8	5	..	23	1	2	39	137,821	69,931	207,752
Narran	8	11	2	18	2	1	42	57,578	24,672	82,250
Culgoa	10	1	..	6	..	1	18	15,900	1,720	17,620
Gunderbooka ..	22	2	..	16	..	..	40	29,109	325	29,434
Irrara	4	..	..	7	..	..	11	11,802	....	11,802
Barrona	..	..	..	..	..	..	....	......	....	......
Cowper	15	10	1	15	4	1	46	72,556	4,117	76,673
Clyde	9	3	..	23	1	5	41	95,321	9,161	104,482
Robinson	20	10	1	14	..	..	45	12,032	936	12,968
Yanda	4	1	..	8	1	..	14	9,272	3,180	12,452
Landsborough ..	..	..	1	4	..	..	5	9,116	100	9,216
Booroondarra ..	..	..	..	4	..	..	4	2,100	....	2,100
Rankin	2	1	1	4	..	..	8	5,856	440	6,296
Killara	1	1	..	2	..	..	4	2,304	145	2,449
Woore	3	1	..	7	..	..	11	7,145	120	7,265
Werunda	1	....	..	1	1	..	3	1,600	....	1,600
Mouramba	29	3	1	12	..	..	45	10,301	533	10,834
Blaxland	25	4	1	17	..	..	47	61,453	646	62,099
Mossgiel	7	1	..	8	1	..	17	23,222	1,330	24,552
Franklin	5	2	..	21	..	4	32	213,739	9,950	223,689
Waljeers	1	2	..	9	1	3	16	236,603	22,291	258,894
Caira	41	4	6	20	..	3	74	348,100	5,379	353,479
Taila	10	..	4	9	..	..	23	18,612	81	18,693
Kilfera	3	..	..	4	..	..	7	12,844	....	12,844
Manara	..	..	..	7	..	..	7	49,788	....	49,788
Young	29	8	1	17	2	..	57	22,676	2,028	24,704
Yungnulgra	3	3	..	3	..	1	10	13,270	4,356	17,626
Fitzgerald	1	1	..	1	..	..	3	640	80	720
Ularara	2	..	..	4	2	..	8	5,721	9	5,730
Yantara	1	..	..	4	..	..	5	3,838	....	3,838
Delalah	..	..	..	1	..	..	1	360	....	360
Thoulcanna	1	1	..	3	..	..	5	2,730	40	2,770
Wentworth	35	2	2	15	..	1	55	81,216	11	81,227
Tara	2	1	1	12	2	2	20	40,945	8,605	49,550
Windeyer	4	..	..	6	..	..	10	27,592	....	27,592
Perry	3	..	..	8	..	1	12	44,996	120	45,116
Menindie	2	..	..	3	..	..	5	4,245	....	4,245
Livingstone	8	1	..	9	..	..	18	13,728	10	13,738
Yancowinna	149	49	2	13	2	1	216	12,648	856	13,504
Tandora	5	..	..	4	..	..	9	3,064	....	3,064
Farnell	3	..	..	2	..	..	5	6,323	....	6,323
Mootwingee	4	..	..	8	..	..	12	6,041	....	6,041
Evelyn	5	2	..	4	..	..	11	4,752	248	5,000
Poole	..	..	..	1	..	..	1	120	....	120
Tongowoko	1	..	..	4	..	..	5	2,060	....	2,060
Total	486	130	24	381	20	26	1,067	1,741,139	171,419	1,912,558

The proportion of land alienated is only 2·31 per cent. of the total area of this district, being an aggregate of 1,912,558 acres out of 82,705,080 acres which the division is estimated to contain. Of this area, 1,741,139 acres are in the occupancy of the landowners, and only 171,419 acres are held under private lease, this kind of tenure being principally met with in the counties of Finch, Narran, Waljeers, Clyde, Franklin, and Tara. The total number of holdings is 1,067, of which 486 are freehold; 130 private rented properties; 24 partly freehold and partly private leasehold; 381 freeholds to which considerable areas of Crown lands are attached; 20 private rented holdings with Crown lands attached; and 26 freeholds with both private rented and Crown lands attached. The average area of alienated holdings for the whole western division is 1,792 acres, the average in many counties, owing to the small number of holdings, being very large. In Waljeers it reaches 16,181 acres; in Manara, 7,112 acres; in Franklin, 6,990 acres; in Finch, 5,327 acres; and in Caira, 4,777 acres. The average in Perry is 3,759 acres; in Windeyer, 2,759 acres; in Clyde, 2,548 acres; in Tara, 2,477 acres; in Narran, 1,958 acres; in Landsborough, 1,843 acres; in Kilfera, 1,835 acres; in Yungnulgra, 1,763 acres; in Cowper, 1,667 acres; in Wentworth, 1,477 acres; in Mossgiel, 1,444 acres; in Blaxland, 1,321 acres; and in Farnell, 1,265 acres. In Irrara it is 1,073 acres; diminishing in the other counties from 979 acres in Culgoa to 120 acres in Poole; while in Yancowinna (in the Broken Hill District) there are 216 holdings averaging 62 acres each. The land is used purely for pastoral purposes, except in the vicinity of townships, where market-gardening and fruit-growing are carried on, principally by Chinese.

The area of alienated land enclosed in this division is 1,774,010 acres; and unenclosed, 138,548 acres. In cultivation there is an area of 7,413 acres, only 181 acres of which are tilled by tenants. The average area of large estates over 10,000 acres in extent is 33,956 acres.

The holdings on the western plains may be classified as follows :—

Size of Holdings.	Alienated Holdings.	Area of Holdings.		Area in Cultivation.	
		Total.	Proportion to Total Area of District.	Total.	Proportion to Area of Holdings.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	357	1,150	0·06	142	12·35
31 to 400 acres	334	46,067	2·41	1,609	3·49
401 to 1,000 acres.........	180	118,973	6·22	1,920	1·61
1,001 to 10,000 acres ...	159	489,979	25·62	2,380	0·49
10,001 acres and upwards	37	1,256,389	65·69	1,362	0·11
Total	1,067	1,912,558	100·00	7,413	0·39

The area of Crown lands occupied in this division is very large, there being no less than 72,553,701 acres under various forms of lease. Under homestead lease there are 9,913,204 acres. There is a small area of 416,494 acres under conditional lease, granted under the Act of 1884, but this form of lease is no longer obtainable in the western division. The number of lessees of Crown lands is 1,682, of whom 427 occupy Crown lands in addition to their alienated holdings, while 1,255 occupy Crown lands only. The value of improvements is returned at £4,033,293—an average of about 1s. 1d. per acre occupied.

The total area of alienated lands and Crown lands occupied is 74,466,259 acres, which is all devoted to pastoral pursuits with the exception of 12,837 acres under crop. The total area of the counties of the western plains is computed at 82,705,080 acres, and the area remaining unoccupied or unalienated is, therefore, little more than eight and a quarter million acres.

AREA OF HOLDINGS.

It will be gathered from an analysis of the figures which have been given that settlement in New South Wales has hitherto tended towards the concentration into comparatively few hands of the lands alienated to a large number of individual selectors, and that in the great majority of cases the owner of the land is also the occupier. Tenancy, as understood in older settled communities, has made comparatively little progress, 90·55 per cent. of the land alienated being yet in the occupancy of the proprietors themselves, or an area of 38,320,961 acres; whilst only 4,000,965 acres, or 9·45 per cent., are held under lease from the freeholders.

Below will be found the number of holdings of various sizes throughout the colony, distinguishing freehold from rented land. It will be understood that here, as elsewhere in this chapter, though reference is made to holders who occupy Crown lands in addition to alienated lands, the area of such Crown lands is not considered in treating of the size of the holdings:—

Size of Holdings.	Number of Holdings.						
	Freehold.	Private Rented.	Partly Freehold & partly Private Rented.	Freehold, with Crown Lands attached.	Private Rented, with Crown Lands attached.	Partly Freehold, partly Private Rented, partly Crown Lands.	Total.
1 to 30 acres	9,934	5,510	707	135	25	8	16,319
31 to 400 acres	17,163	6,920	1,980	5,189	138	236	31,626
401 to 1,000 acres	3,100	670	665	2,723	55	210	7,423
1,001 to 10,000 acres	1,518	235	405	1,881	31	412	4,482
10,001 acres and upwards	90	7	31	443	2	106	679
Total	31,805	13,342	3,788	10,371	251	972	60,529

The alienated area of the holdings referred to in the table just given, whether freehold or rented, will be found in the figures subjoined, which also show the percentage of alienated land to be found in the holdings of each specified size, as well as the proportion each size of holding, whether freehold or rented, bears to the total area alienated :—

Size of Holdings.	Area of Holdings.			Proportion to Total Alienated Area of the Colony.		
	Freehold.	Rented.	Total.	Freehold.	Rented.	Total.
	acres.	acres.	acres.	℔ cent.	℔ cent.	℔ cent.
1 to 30 acres	84,071	58,322	142,393	0·20	0·14	0·34
31 to 400 acres	3,676,959	1,025,454	4,702,413	8·69	2·42	11·11
401 to 1,000 acres	4,034,760	690,103	4,724,863	9·53	1·63	11·16
1,001 to 10,000 acres ...	10,383,302	1,449,679	11,832,981	24·53	3·43	27·96
10,001 acres and upwards	20,141,869	777,407	20,919,276	47·59	1·84	49·43
Total...............	38,320,961	4,000,965	42,321,926	90·54	9·46	100·00

The above figures strikingly illustrate the present condition of colonization in New South Wales, and their meaning should not be lost sight of by those who watch with attention the various phases of settlement in this country. The proportion of land in holdings less than 30 acres in extent is only 0·34 per cent. of the total area of land alienated in the colony, and represents an aggregate of 142,393 acres out of a total of 42,321,926 acres; this small acreage consists of 16,319 holdings, each occupying an average of 8·7 acres. Holdings between 31 and 400 acres in extent number 31,626, with an aggregate area of 4,702,413 acres, or 11·11 per cent. of the area alienated in the colony, giving an average of 149 acres per holding. It is in this category that a great portion of the land devoted to cultivation is to be found. In areas between 401 and 1,000 acres are to be found 7,423 estates, the number decreasing rapidly as the area increases, aggregating in all 4,724,863 acres, or 11·16 per cent. of the area alienated, giving each an average of 637 acres. The tendency just noted becomes still more marked in the holdings between 1,001 and 10,000 acres in extent, their number being only 4,482, whilst they aggregate 11,832,981 acres, or 27·96 per cent. of the total area alienated in the colony, giving an average of

2,640 acres per holding. The climax is reached, however, in the holdings of more than 10,000 acres in extent. Of these there are but 679, aggregating 20,919,276 acres, or 49·43 per cent. of the whole area alienated from the Crown, each averaging an area of 30,819 acres.

SETTLEMENT AND AGRICULTURE.

Some remarks as to the relative state of agriculture and of settlement on the alienated rural lands of the colony cannot fail to be of interest, especially when read in conjunction with the preceding figures. The following table deals with this question, and the figures carry with them their own explanation :—

Size of Holdings.	Alienated Holdings.	Area Alienated.		Area Cultivated.	
		Total.	Proportion to area of Colony.	Total.	Proportion to Area Alienated.
	No.	acres.	per cent.	acres.	per cent.
1 to 30 acres	16,319	142,393	0·07	47,780	33·55
31 to 400 acres	31,626	4,702,413	2·40	554,300	11·79
401 to 1,000 acres	7,423	4,724,863	2·41	292,650	6·19
1,001 to 10,000 acres	4,482	11,832,981	6·04	319,487	2·70
10,001 acres and upwards	679	20,919,276	10·68	111,723	0·53
Total	60,529	42,321,926	21·60	1,325,940	3·13

Although the highest proportion of land cultivated in any of these series, when compared with the total area alienated in the colony, is found in holdings from 31 to 400 acres in extent, yet when compared with the aggregate area alienated in the series itself it represents only 11·79 per cent. of it; whilst on the smaller holdings, less than 31 acres in extent, as much as 33·55 per cent. of the area alienated is under cultivation. The proportion considerably decreases as the higher areas are reached, being reduced to 0·53 per cent. in those over 10,000 acres.

From the table given on page 302, some interesting information may be gleaned with regard to the proportion of the number of owners of land who still occupy their freeholds, those who reside on rented lands, and those who occupy, in addition to their freeholds, lands rented either from private owners or from the Crown; but a more comprehensive view of these two phases of settlement may be obtained by an examination of the following table, in which the holdings are divided into a greater number of categories according to their sizes :—

Size of Holdings.	Holdings consisting of—							Total Area Alienated.
	Freehold Land.	Private Rented Land.	Partly Freehold & partly Private Rented Land.	Freehold Land, with Crown Lands attached.	Private Rented Land, with Crown Lands attached.	Partly Freehold, partly Private Rented & partly Crown Lands.	Total.	
	No.	No.	No.	No.	No.	No.	No.	acres.
1 to 5 acres	5,410	2,687	217	85	14	1	8,414	22,291
6 to 15 acres	2,863	1,503	284	28	6	3	4,687	45,670
16 to 30 acres	1,661	1,320	206	22	5	4	3,218	74,432
31 to 50 acres	3,647	1,838	242	637	32	7	6,403	267,503
51 to 100 acres	4,487	2,307	415	1,005	38	22	8,274	658,212
101 to 200 acres	4,878	1,646	640	1,372	31	67	8,634	1,310,212
201 to 300 acres	2,248	684	412	946	19	66	4,375	1,107,974
301 to 400 acres	1,903	445	271	1,229	18	74	3,940	1,358,512
401 to 500 acres	876	205	178	484	10	41	1,794	819,480
501 to 600 acres	625	140	152	346	10	33	1,306	727,588
601 to 700 acres	829	168	99	1,294	23	35	2,448	1,579,371
701 to 800 acres	313	63	106	229	5	31	747	567,099
801 to 900 acres	230	46	74	172	2	29	553	477,209
901 to 1,000 acres........	227	48	56	198	5	41	575	554,116
1,001 to 1,500 acres......	590	98	157	614	12	110	1,581	1,963,409
1,501 to 2,000 acres......	307	60	77	344	4	63	855	1,515,596
2,001 to 3,000 acres......	307	50	75	351	8	72	863	2,143,686
3,001 to 4,000 acres......	134	8	36	201	1	51	431	1,505,495
4,001 to 5,000 acres......	56	8	21	125	2	37	249	1,133,769
5,001 to 7,500 acres......	78	3	31	158	1	49	320	1,971,766
7,501 to 10,000 acres	46	8	8	88	3	30	183	1,599,260
10,001 to 15,000 acres....	36	4	15	147	....	33	235	2,901,896
15,001 to 20,000 acres....	20	2	3	75	....	17	117	2,067,990
20,001 to 30,000 acres....	14	1	7	82	....	24	128	3,189,444
30,001 to 40,000 acres....	10	....	3	36	....	13	62	2,224,899
40,001 acres and upwards	10	....	3	103	2	19	137	10,535,047
Total	31,805	13,342	3,788	10,371	251	972	60,529	42,321,926

From the above it will be seen that the total number of occupiers of freeholds only is 31,805, the proportion to the total number of occupiers being fairly constant in each size of holdings. Absolute tenants of private lands, who number 13,342, are far more numerous in the smaller classes of holdings, and rapidly diminish both in number and in proportion as the estates become larger. The same is the case with regard to holders of freehold and private rented land, who number only 3,788. The persons who possess freeholds with Crown lands attached number 10,371, and 45 per cent. of the holdings over 1,000 acres in extent are in this category. Occupiers whose holdings are partly made up of private rented lands and partly of Crown lands only number 251 altogether ; while owners of freehold, who are Crown tenants and private tenants at the same time, show a total of 972.

There are 2,124 occupiers of Crown lands only, not connected with alienated holdings. The total area of alienated holdings over 1 acre in extent in the colony is 42,321,926 acres, and of the Crown lands occupied (excluding 8,577,725 acres which were not returned and which were probably abandoned) 115,834,868 acres, making a total of 158,156,794 acres. Of this area, 156,808,194 acres are used for grazing and dairying, and 1,348,600 acres for agriculture. The total value of improvements on Crown lands is returned at £8,159,733—equal to 1s. 5d. per acre.

The figures in regard to holdings represent rural settlement only, and account for 42,321,926 acres out of a total of 44,833,006 acres that have been alienated. The balance of 2,511,080 acres represents lands in cities and towns, and rural lands abandoned, to all appearances, by their owners. The lands of the colony are held by 125,000 persons, the owners being almost equally distributed between the towns and the country. The question of the ownership of lands is dealt with at some length in the second volume, and some interesting particulars are there given which the land tax has brought to light.

LABOUR SETTLEMENTS.

In June, 1893, an Act was passed to promote the establishment of labour settlements, thus enabling persons without capital to provide for themselves and their families. The land may be leased for twenty-eight years, with a right of renewal, and loans of money are granted to enable the settlers to carry on operations, the first repayment of the loan and the rent of the land not being required until four years from the date of the lease. During 1894 an Amending Act was passed, empowering the Minister to double the amount of loan authorised under the original Act. The control of each establishment is left in the hands of a Board. Funds are provided by the Treasury from which the Board may, with the approval of the Minister, grant the following sums:—To each enrolled member with a family dependent on him, not exceeding £50; to married persons without family, a sum not exceeding £40; and to each member unmarried, a sum not exceeding £30. At the close of the year 1895, three settlements were in existence, viz., Pitt Town, Wilberforce, and Bega. The Pitt Town settlement, which was established in June, 1893, has an area of 2,100 acres. The total population at the end of 1895 was 129, viz., 23 men, 22 women, and 84 children. The value of improvements, exclusive of crops, is £4,685, and the total amount of loans advanced, £7,705. The Bega settlement was established in July, 1893, the area being 1,360 acres and the population consisting of 19 men, 19 women, and 77 children, or a total of 115. The improvements are valued at £1,253, and the amount of loans is £1,350. In August, 1893, the Wilberforce settlement was formed, and now contains 1,630 acres, finding home and employment for 19 men and 14 women, with 51 children, or a total population of 84. The value of improvements is £2,532, and the amount of loans advanced £1,940.

AGRICULTURAL PRODUCTION.

THE soil of New South Wales is as varied as the climate is diversified, and within the boundaries of the colony may be cultivated not only the productions of the temperate regions, but even those of cold and of sub-tropical latitudes. Except in the inaccessible or rugged portions of the mountain chains and the more arid regions of the north-western districts, the soil is almost everywhere susceptible of cultivation. The area absolutely unfit for occupation of any sort has been roughly estimated at less than 5,000,000 acres; and it may be said that the greater part of the land adapted for settlement is in some form or other capable of being cultivated. But success in tillage in the colony is altogether independent of the mere fitness of the soil for cultivation. An irregular rainfall and a want of uniformity in the seasons, which are the chief characteristics of the climate of a large part of the interior, have impeded the advance of agriculture in the great western plains. And to these obstacles there may be added the cost of transport, which, owing to the great distance that produce has to be carried by land, has told greatly against cultivation for export—a resource which must be the chief hope of the farmers in a country so sparsely populated as New South Wales, and consequently one affording such a small home market.

CULTIVATION.

The records relating to the farming operations of the early days of the colony are necessarily both imperfect and meagre. Among other items of interest, it is recorded that the first settler, a man named James Ruse, entered on his farm of 30 acres at Parramatta on the 25th February, 1789; and that the first free emigrant to undertake the cultivation of the soil of the colony was a German, named Philip Schaffer, who came out with the First Fleet as an agricultural superintendent, chiefly with a view to attempt the culture of tobacco on behalf of the Government. The first Government farm was an area of 9 acres at Farm Cove, the designation of which still preserves a memory of this early essay in husbandry, as does that of Garden Island, where one of the first attempts in fruit-growing was made. The character of the soil in the vicinity of Farm Cove was, however, by no means favourable to agriculture, and the crop produced was consequently very inadequate. An agricultural settlement was next formed at Rosehill, now known as

Parramatta; and in November, 1791, there were here upwards of 700 acres of land under cultivation. During the same year it is recorded that no less than 1,000 bushels of wheat, as well as 500 bushels of maize, were reaped on Norfolk Island. At the close of the year 1792 there were under cultivation in New South Wales 1,186 acres with maize, 208 with wheat, and 24 with barley; 121 acres were laid out as gardens; and 161 acres had been cleared ready for the plough. In 1800 the total quantity of land under cultivation amounted to 7,677 acres. In 1803 no less than 125,476 acres were occupied by the Government, or had been granted to individuals; 16,624 acres had been cleared, 7,118 acres were under wheat, the average yield being 18 bushels to the acre; and 5,279 acres were under barley, maize, and other crops. Owing partly to disastrous floods, and partly to the state of political uncertainty which prevailed during the next few years, the area in cultivation decreased, and when Governor Macquarie came to the colony in 1810, only 7,615 acres of land were in tillage, while when he left in 1821 this area had increased to 32,267 acres. With the crossing of the Blue Mountains the area of settlement was largely widened, but agriculture was for many years confined to the coastal zone and the table-land. At the present time an area comprising nearly 1,650,000 acres, including grass-lands, is in cultivation; while if the area prepared and cleared for the next season's agricultural operations be included, the total reaches 2,040,573 acres. The area under crops, properly so called, during the year ended March, 1896, was 1,348,600 acres, and that under artificially-sown grasses, 300,862 acres, or a total area in cultivation of 1,649,462 acres.

The progress of cultivation from year to year, beginning in 1877 and continued to the present time, is shown below. The decrease of 39,080 acres in 1896 was wholly due to the smaller area returned as under permanent artificially-sown grasses. The area actually under crops was larger by 22,636 acres than in 1895, but that under grasses declined to the extent of 61,716 acres:—

Year ended 31st March.	Area in cultivation, including sown grass-lands.		Year ended 31st March.	Area in cultivation, including sown grass-lands.	
	Total.	Average per inhabitant.		Total.	Average per inhabitant.
	acres.	acres.		acres.	acres.
1877	513,840	0·8	1887	975,471	1·0
1878	546,556	0·9	1888	1,048,305	1·0
1879	613,642	0·9	1889	999,298	1·0
1880	635,641	0·9	1890	1,164,475	1·1
1881	710,337	0·9	1891	1,241,419	1·1
1882	645,068	0·8	1892	1,179,621	1·0
1883	733,582	0·9	1893	1,372,007	1·2
1884	789,082	0·9	1894	1,509,404	1·2
1885	852,017	0·9	1895	1,688,542	1·4
1886	868,093	0·9	1896	1,649,462	1·3

Only about 0·7 per cent. of the total area of New South Wales is actually devoted to the growth of agricultural produce, and if the small extent of land upon which permanent artificial grasses have been sown for dairy-farming purposes be added to the area under crops, the proportion reaches but little over 0·8 per cent. of the total area of the colony, and represents about 1·3 acres per head of its population. The proportion of the total cultivated area, computed on the total area of alienated rural lands, is about 3·2 per cent.

An impression appears to prevail that in this country purchased lands are used by the settlers for agricultural purposes, whilst Crown leases only are used for grazing; but such is far from being the case, as the great majority of selectors are only graziers in a small way of business, and agricultural settlements, pure and simple, are confined to very limited areas in the alluvial lands of the lower valleys of the coastal rivers, and around two or three centres in the middle division of the tableland. Of the total area under crops, 1,001,584 acres, or 74·27 per cent., were cultivated by the owners; while 347,016 acres, or 25·73 per cent., were cultivated by tenant occupiers, including Crown land lessees. If the area under permanent grasses were added, the proportion of cultivated leased lands would be somewhat higher, as a number of the dairy farms in the southern coast district, where grass is largely sown, are held on lease.

New South Wales is essentially a pastoral country, and with the exception of a few districts where agriculture has taken a hold, the cultivation of the soil is secondary to stock-breeding. This circumstance is by no means due to lack of good land, and it cannot be ascribed to the defects of the climate; for the colony possesses land the capabilities of which are unsurpassed for the production of any kind of agricultural produce, and its climate is certainly superior to that of other parts of the Australian continent where the cultivation of cereals has been carried on for years past. Taken as a whole, the yield of crops in New Sonth Wales is larger than that obtained in any other continental colony, but, at the same time, communication with the metropolitan market is much more difficult. Agriculture cannot be developed unless access to the markets be rendered both easy and cheap, and to secure this desirable end in a country so vast, and with so small a population, is a matter not easily accomplished. Up to the present, stock-rearing has maintained the position of an occupation which, while entailing considerably less physical labour and personal inconvenience, has yielded results far more remunerative than those of agriculture; but as population increases, and there remains no more land to be taken up for grazing purposes, agricultural pursuits must be resorted to under the pressure of an ever-increasing demand. As it is, however, the land devoted to agriculture affords permanent employment to a fair proportion of the working population of the province. The area actually under crop varies, owing to a variety of circumstances, but there is a steady increase in the surface cleared for utilisation in this way.

The number of persons reported as employed in agricultural and dairy-farming pursuits during the year ended March, 1896, was 86,772, of whom 15,298 were females. Of the total number, 59,838 males and 4,203 females were engaged in purely farming operations, whilst the dairy-farming industry gave employment to 11,636 males and 11,095 females. If to these be added 31,930 persons engaged in pastoral pursuits, it is estimated that rural occupations absorb the energies of 118,702 persons. As the geographical distribution of employment in these pursuits presents interesting features, the numbers of persons employed in the great divisions of the colony, according to the classification adopted, are shown below. It must be understood that the number given as engaged in dairy-farming does not include 338 hands employed in town factories:—

Division.	Persons employed in Agricultural Pursuits principally.					Persons employed in Pastoral Pursuits.	Persons employed in Rural Occupations.
	Agriculture.		Dairy Farming.		Total.		
	Males.	Females	Males.	Females.			
The Coast—							
Northern District.........	10,702	257	1,613	1,528	14,160	1,413	15,513
Hunter and Hawkesbury Valleys	6,544	391	870	1,362	9,167	971	10,138
County of Cumberland and Metropolis........	7,054	258	746	276	8,334	232	8,566
Southern District	4,052	155	5,775	3,215	13,197	1,317	14,514
Total	28,352	1,061	9,004	6,381	44,798	3,933	48,731
The Table-land—							
Northern District.........	4,784	376	284	627	6,071	3,288	9,359
Central ,, ...	9,549	1,264	765	1,491	13,069	3,419	16,488
Southern ,, ...	9,424	651	1,313	1,993	13,381	5,571	18,952
Total	23,757	2,291	2,362	4,111	32,521	12,278	44,799
The Western Slope—							
Northern District.........	1,294	124	65	166	1,649	3,927	5,576
Central ,, ...	714	157	13	29	913	2,105	3,018
Southern District and Valley of the Murray	5,201	530	152	366	6,249	4,458	10,707
Total	7,209	811	230	561	8,811	10,490	19,301
The Western Plains	520	40	40	42	642	5,229	5,871
Grand Total	59,838	4,203	11,636	11,095	86,772	31,930	118,702

In order to appreciate the proper bearing of the figures in the above table, it is advisable to consider them in conjunction with the figures showing the area brought into cultivation within each division, and these will be found appended :—

Division.	Total Area occupied.	Area under Crops.	Area Cleared and Prepared for Cultivation.	Area under Permanent Artificially-sown Grasses.	Area Ring-barked and Partially Cleared.
The Coast—	acres.	acres.	acres.	acres.	acres.
Northern District....	3,560,786	144,575	18,312	84,982	719,401
Hunter and Hawkesbury Valleys.........	1,874,248	62,028	17,088	5,179	566,475
County of Cumberland and Metropolis	465,260	41,510	3,569	1,019	32,058
Southern District.....	1,957,611	40,870	16,286	150,761	627,600
Total	7,857,905	288,983	55,255	241,941	1,945,534
The Table-land—					
Northern District.....	10,365,754	90,439	47,985	9,084	2,148,216
Central ,, ...	8,677,726	237,149	89,437	13,915	3,024,617
Southern ,, ...	12,082,215	251,000	70,021	16,730	4,297,370
Total	31,125,695	578,588	207,443	39,729	9,470,203
The Western Slope—					
Northern District.....	14,899,241	19,624	14,116	469	2,311,082
Central ,, ...	10,106,999	27,758	7,583	3,333	3,748,214
Southern District, and Valley of the Murray	19,700,695	420,810	103,695	15,287	5,688,891
Total	44,706,935	468,192	125,394	19,089	11,748,187
The Western Plains ...	74,466,259	12,837	3,019	103	2,406,452
Grand Total......	158,156,794	1,348,600	391,111	300,862	25,570,376

Putting together the figures in the tables just given, it will be seen that the average area to each person engaged in rural pursuits is 1,332 acres, ranging from 54 acres in the metropolitan county to 12,684 acres in the western plains. The average for each district is shown below, and though a close distinction cannot be drawn between the actual area affording employment to a man in each of the three main divisions of farming, it will be apparent enough that the districts devoted to market-gardening, fruit-growing, dairying, cereal-farming, and grazing offer most employment per unit [illegible] given. Apart from the metropolitan district, [illegible]ous orchards and market-gardens, the South Coast Districts surpass all the others with one person to every 135 acres, followed by the Hunter River District, with one to every 185 acres, and the North Coast, with one to every 230 acres. Only two other districts fall below the proportion of one person to 1,000 acres.

Division.	Area occupied.	Persons employed.	Area to each person employed.
The Coast—	acres.	No.	acres.
Northern District	3,560,786	15,513	230
Hunter and Hawkesbury Valleys	1,874,248	10,138	185
County of Cumberland and Metropolis	465,260	8,566	54
Southern District	1,957,611	14,514	135
Total	7,857,905	48,731	161
The Table-land—			
Northern District	10,365,754	9,359	1,108
Central District	8,677,726	16,488	526
Southern District	12,082,215	18,952	638
Total	31,125,695	44,799	695
The Western Slope—			
Northern District	14,899,241	5,576	2,672
Central District	10,106,999	3,018	3,349
Southern District and Valley of the Murray	19,700,695	10,707	1,840
Total	44,706,935	19,301	2,316
The Western Plains	74,466,259	5,871	12,684
Grand Total	158,156,794	118,702	1,332

The total area of New South Wales is 198,848,000 acres. Exclusive of all rivers, lakes, and streams, the area is estimated at 195,882,150 acres, of which 42,321,926 acres of alienated land, and 115,834,868 acres of Crown land, making a total of 158,156,794 acres, were devoted to rural industries on the 31st March, 1896. Of this area, 13,585,374 acres of alienated land and 11,985,002 acres of Crown land were ring-barked and partly cleared; 284,937 acres of alienated land and 15,925 acres of Crown land were under permanent artificially-sown grasses; 391,111 acres of alienated land were cleared and prepared for cultivation; and 1,325,940 acres of alienated land and 22,660 acres of Crown land making a total of 1,348,600 acres, were under crops. Cultivation is carried on throughout the colony in patches scattered over vast stock-grazing areas. The best lands for producing cereals are still, and will probably remain for many years, in the hands of the pastoralists; whilst farmers have not always settled on the kind of country best suited for the cultivation of their crops. It is the settler, not the soil, that has determined this point. It becomes, therefore, difficult to divide the country into agricultural lands, as distinguished from those purely pastoral in character.

The area devoted to each of the principal crops during the agricultural year ended 31st March, 1896, with the quantity or value of the produce harvested, will be found below:—

Description of Crop.	Area.	Production.	Description of Crop.	Area.	Production.
	acres.			acres.	
Wheat—			**Sorghum for Green Food**	13,794	......
Grain	596,684	5,195,312 bush.	**Orangeries—**		
Hay	172,614	99,679 tons	Productive	8,759	496,245 cases
Maize—			Non-bearing	3,197	......
Grain	211,104	5,687,030 bush.	**Grape-vines—**		
Green Food	13,192	......	For wine-making	4,390	885,673 galls.
Oats—			For table use	2,487	4,017 tons
Grain	23,750	374,196 „	Non-bearing	642	......
Hay	120,857	79,635 tons	**Market-gardens**	6,899	£170,115
Green Fodder	4,702	......	**Pumpkins and Melons**	4,427	12,230 tons
Lucerne and Sown Grasses—			**Millet—**		
			Grain	865	9,725 bush.
Hay	24,081	48,959 „	Green Fodder	868	......
Green Fodder	31,353	......	**Rye—**		
Sugar-cane—			Grain	753	8,078 „
Cut this year	14,398	207,771 „	Green Fodder	381	......
Not cut	18,529	......	**Turnips**	303	1,088 tons
Potatoes	24,722	56,179 „	**Tobacco**	1,231	10,548 cwt.
***Fruit Orchards—**			**Peas and Beans**	657	17,347 bush.
Productive	20,635	£130,735	**Mangold-wurzel**	38	107 tons
Non-bearing	8,145	......	**Onions**	183	327 „
Barley—			**All other Crops**	2,083	£25,351
Grain	7,590	96,119 bush.			
Hay	1,744	1,398 tons			
Green Fodder	2,543	......	Total	1,348,600	......

* Excluding vines and oranges.

The quantities of agricultural produce harvested during the year ended March, 1896, and the value of each crop, are given in the following statement, the values being the average for the whole colony at the time the harvest was gathered:—

Crop.	Production or Area.	Value.	Crop.	Production or Area.	Value.
		£			£
Wheat	5,195,312 bush.	1,022,827	Tobacco	10,548 cwt.	15,822
Maize	5,687,030 „	805,663	Grapes	4,017 tons.	56,238
Barley	96,119 „	14,718	Orangesand Lemons	496,245 cases.	70,301
Oats	374,196 „	43,266	Orchards	20,635 acres.	130,735
Other Grain	17,803 „	2,671	Market-gardens	6,899 „	170,115
Hay	229,671 tons.	1,004,811	Peas and Beans	17,347 bush.	2,602
Straw	24,097 „	28,916	Pumpkins & Melons	12,230 tons.	30,575
Green Food	66,833 acres	233,916	Wine	885,673 gall.	66,425
Potatoes	56,179 tons.	224,716	Brandy	7,149 „	1,430
Onions	327 „	2,403	Unspecified Crops	2,083 acres.	25,351
Turnips and Mangold-wurzel	1,195 „	1,768			
Sugar-cane	207,771 „	111,677	Total value £		4,066,946

The area under crops, the value of the agricultural produce, and the average value per acre for the year 1871, and for each year since 1881, are given below :—

Year ended 31st March.	Area under crops.	Total Value of Produce.	Average Value per acre.		
	acres.	£	£	s.	d.
1871	397,389	2,220,000	5	11	9
1881	629,180	3,829,660	6	1	9
1882	583,868	4,194,346	7	3	8
1883	660,227	3,304,891	5	0	1
1884	702,131	3,806,182	5	8	5
1885	735,021	2,836,697	3	17	2
1886	737,701	3,375,882	4	11	6
1887	837,468	3,943,645	4	14	2
1888	855,627	4,151,692	4	17	1
1889	798,966	3,298,759	4	2	7
1890	947,072	4,459,861	4	14	2
1891	852,704	4,136,887	4	17	0
1892	846,383	3,584,490	4	4	8
1893	1,010,727	3,961,367	3	18	5
1894	1,206,992	3,861,771	3	4	0
1895	1,325,964	3,395,571	2	11	3
1896	1,348,600	4,066,946	3	0	4

WHEAT.

In the early days of settlement the Hawkesbury River Valley, and the country adjacent to the towns of Parramatta, Liverpool, Penrith, Camden, and Maitland, were the principal centres of wheat cultivation. Unskilful farming, and the consequent exhaustion of the soil, with the attendant evils of rust, smut, and other diseases, caused these districts to be abandoned little by little as wheat-country, and on the discovery of the Bathurst Plains their importance at once ceased. The districts of Bathurst, Goulburn, Gundagai, Tumut, Young, Monaro, and New England were each in turn occupied by agriculturists, and the suitability of their soil and climate, as well as that of the whole of the mountain plateau, for the growth of this cereal became definitely established. Subsequently the cultivation was extended in a south-westerly direction to the Riverina Plains, where at present it is receiving marked attention, as will be seen from the following table, showing the distribution of the area cut for grain during the agricultural year ended March, 1896, with the production and average yield of each of the great divisions of the colony :—

Division.	Area cut for grain.	Yield.	
		Total.	Per acre.
	acres.	bushels.	bushels.
The Coast—			
Northern District	985	10,813	11·0
Hunter and Hawkesbury Valleys	1,417	8,657	6·1
County of Cumberland and Metropolis	26	280	10·8
Southern District	485	1,621	3·3
Total	2,913	21,371	7·3
The Table-land—			
Northern District	36,031	369,239	10·2
Central ,,	86,074	691,947	8·0
Southern ,,	131,256	845,614	6·4
Total	253,361	1,906,800	7·5
The Western Slopes—			
Northern District	7,506	73,356	9·8
Central ,,	13,698	92,945	6·8
Southern District and Valley of the Murray	318,110	3,096,175	9·7
Total	339,314	3,262,476	9·6
The Western Plains	1,096	4,665	4·3
Grand Total	596,684	5,195,312	8·7

It is interesting to note that agriculture is gaining ground in those districts where the greatest number of the huge freehold estates, accumulated by pastoralists under the auction sales and improvement clauses of the Land Act of 1861, are situated. It is in the valleys of the Murray, the Murrumbidgee, and the Lachlan that the struggle between squatter and selector has been fiercest, and it is there that the most remarkable increase in wheat-growing and in agriculture generally is now exhibited. This point is illustrated by the following statement, which shows the increase or decrease in the total area cultivated and in the land under wheat in each of the divisions of the colony during the ten years between March, 1886, and March, 1896 :—

Division.	Total area under Crops.		Area under Wheat for Grain and Hay.	
	1886.	1896.	1886.	1896.
	acres.	acres.	acres.	acres.
The Coast—				
Northern District	98,179	144,575	292	1,034
Hunter and Hawkesbury Valleys	62,442	62,028	4,833	1,801
County of Cumberland and Metropolis	16,212	41,510	65	584
Southern District	40,379	40,870	1,753	1,408
Total	217,212	288,983	6,943	4,827
The Table-land—				
Northern District	63,015	90,439	34,459	41,383
Central ,,	179,033	237,149	112,874	131,054
Southern ,,	122,468	251,000	79,666	168,860
Total	364,516	578,588	226,999	341,297
The Western Slope—				
Northern District	11,664	19,624	8,844	10,694
Central ,,	25,740	27,758	21,941	23,148
Southern District and Valley of The Murray	111,346	420,810	98,424	377,321
Total	148,750	468,192	129,209	411,163
The Western Plains	7,223	12,837	6,838	12,011
Grand Total	737,701	1,348,600	369,989	769,298

The figures just given show clearly that by far the larger proportion of the increase, both in the area devoted to wheat and in general cultivation, has taken place in the Riverina district. Indeed, in other parts of the country the additional land devoted to cereals has been, on the whole, comparatively small; while in some districts there has been a falling off. In the following table the area under wheat harvested for grain and the yield in bushels are given. The periods selected are, as in the former table, the years ended March, 1886 and 1896 :—

Division.	1886.		1896.	
	Area for Grain.	Production.	Area for Grain.	Production.
	acres.	bushels.	acres.	bushels.
The Coast—				
Northern District	271	4,500	985	10,813
Hunter and Hawkesbury Valleys	2,375	30,745	1,417	8,657
County of Cumberland	3	15	26	280
Southern District	254	3,543	485	1,621
Total	2,903	38,803	2,913	21,371
The Table-land—				
Northern District	27,281	384,962	36,031	369,239
Central ,,	82,598	695,694	86,074	691,947
Southern ,,	67,639	733,402	131,256	845,614
Total	177,518	1,814,058	253,361	1,906,800
The Western Slope—				
Northern District	4,115	35,924	7,506	73,356
Central ,,	10,221	77,144	13,698	92,945
Southern District and Valley of the Murray	69,890	766,087	318,110	3,096,175
Total	84,226	879,155	339,314	3,262,476
The Western Plains	220	1,207	1,096	4,665
Grand Total	264,867	2,733,223	596,684	5,195,312

The cultivation of wheat during the past thirty years has been very irregular. For some years prior to 1867 the area under crop had remained almost stationary at a little more than 125,000 acres. In 1867, however, the acreage increased to 175,000 acres, and eleven years later the area reaped for grain was practically the same, although during the intervening period it had fluctuated to the extent of 50,000 acres. Then more land was again laid under the cereal, and in 1879 the area increased to 233,252 acres. Since that time cultivation has been greatly extended, the maximum area cut for grain being reached in 1895 with 647,483 acres. During the year ended March, 1896, the prolonged drought greatly damaged the crops, and the area reaped for grain fell to 596,684 acres, but the total extent of land under wheat was only 3,982 acres less than in the preceding year. Below will be found a statement showing the area under wheat for grain during the last thirty years, with the total production and the average yield per acre. For the year ended March, 1897, it is estimated that 870,000 acres of wheat have been sown for grain, and that the production will be 8¾ million bushels—by far the largest yield on record:—

Year ended 31st March.	Area under Crop.	Yield.		Year ended 31st March.	Area under Crop.	Yield.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels.
1867	175,033	2,226,027	12·72	1883	247,361	4,012,395	16·35
1868	149,142	1,433,807	9·61	1884	289,757	4,345,437	15·00
1869	164,206	1,787,085	10·88	1885	275,249	4,271,394	15·52
1870	189,452	3,200,959	16·89	1886	264,867	2,733,133	10·45
1871	147,997	999,595	6·75	1887	337,730	5,868,844	17·37
1872	154,030	2,229,642	14·48	1888	389,390	4,695,849	12·06
1873	177,551	2,898,463	16·32	1889	304,803	1,450,503	4·75
1874	169,330	2,273,620	13·43	1890	419,758	6,570,335	15·65
1875	166,911	2,148,394	12·87	1891	333,233	3,649,216	10·95
1876	133,609	1,958,640	14·66	1892	356,666	3,963,668	11·11
1877	145,608	2,391,979	16·43	1893	452,921	6,817,457	15·05
1878	176,686	2,455,507	13·84	1894	593,810	6,502,715	10·95
1879	233,252	3,439,326	14·74	1895	647,483	7,041,378	10·88
1880	233,368	3,613,266	15·48	1896	596,684	5,195,312	8·71
1881	253,137	3,717,355	14·69				
1882	221,887	3,405,966	15·35	Average for 30 Years......			12·78

The great increase in the area under crop in 1897 shows that increased attention is being directed to the cultivation of wheat in New South Wales, and there is evidence that the yield is sufficient to make the crop payable. Hitherto the colony has lagged behind its neighbours in this important industry, but in the above table it has been shown that lack of capacity to produce a payable average has not been the cause of this tardiness in development. Taking the whole period of thirty years, it will be seen that the average yield has been 12·78 bushels to the acre. A yield of 15 bushels has not been uncommon, while in 1887 the average reached the comparatively high figure of 17·3 bushels. As before noted, many of the crops were ruined by the absence of rain during 1895-6, and the average of 8·71 bushels yielded in that year was the lowest obtained since 1867, with the exception of 6·75 bushels in 1871 and 4·75 bushels in 1889.

Dividing the period of thirty years into quinquennial periods, the average yields per acre were as follow:—

Quinquennial period.	Average per acre.
1867-71	11·68 bushels.
1872-76	14·36 ,,
1877-81	14·99 ,,
1882-86	14·47 ,,
1887-91	12·46 ,,
1892-96	11·15 ,,

In spite of the lower averages for the last ten years, it may be said that from equal qualities of soil a better yield is now obtained than twenty years ago—a result due largely to improved farming; but at the same time it must not be lost sight of that the occurrence of rust, smut, and other forms of disease in wheat has been less frequent and less general of recent years.

If the average yield per acre be compared with the results obtained in the other Australasian colonies, it will be found that New South Wales occupies a satisfactory position, its average being exceeded by only one other province of continental Australia, viz., Queensland. Below will be found the average of each province, and the maximum and minimum obtained during the last ten years. It will be seen from the following table that in four out of the five continental colonies the season 1895-6 was the worst experienced during the decade, the drought being general:—

Colony.	Yield in 1896.	Yield per acre during ten years, 1887–96.		
		Mean average.	Maximum.	Minimum.
	bushels.	bushels.	bushels.	bushels.
New South Wales	5,195,312	11·7	17·4 (1887)	4·8 (1889)
Victoria	5,669,174	9·3	11·5 (1887)	4·0 (1896)
Queensland	123,630	13·9	22·1 (1888)	4·6 (1896)
South Australia	5,929,300	6·5	7·9 (1890)	4·2 (1896)
Western Australia	188,076	11·5	14·0 (1890)	8·1 (1896)
Tasmania	1,164,855	17·5	20·2 (1889)	15·1 (1894)
New Zealand	6,843,768	24·0	27·9 (1896)	19·0 (1891)

Compared with the production of wheat in the majority of European countries, that of New South Wales will appear inconsiderable, both as regards the total quantity obtained, and the yield per acre. In the following table will be found returns from some of the chief wheat-growing countries of the world, showing the average production per acre of this cereal:—

Country.	Average yield per acre.	Country.	Average yield per acre.
	bushels.		bushels.
Denmark	31·1	Ontario	14·1
United Kingdom	29·3	Hungary	13·6
Norway	25·1	Italy	12·1
Belgium	21·5	United States	11·7
Holland	21·5	Quebec, Nova Scotia, and New Brunswick.	9·9
Manitoba	20·3		
Germany	18·8	Russia in Europe	4·6
France	16·9		
Austria	16·4	New South Wales (30 years)	12·8
British Columbia	15·0	Australasia (10 years)	9·6

DEFICIENCY OF WHEAT PRODUCTION.

The production of wheat in New South Wales still remains considerably below the consumption. The accompanying table has been prepared with a view to illustrate the state of the colony in this respect, and shows the total consumption of wheat, the home production, and the net deficiency for thirty-four years. In the column giving the total consumption, no account is taken of the quantity added to or taken from stocks, as the case may be; and the figures showing the total consumption and the average per head are exclusive of wheat required for seed:—

Period or Year.	Total per annum.			Average per head per annum.		
	Apparent consumption.	Home production.	Apparent deficiency.	Apparent consumption.	Home production.	Apparent deficiency.
	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
1862-66	2,397,139	977,343	1,419,796	6·2	2·5	3·7
1867-71	3,038,512	1,712,619	1,325,893	6·4	3·6	2·8
1872-76	3,638,081	2,090,807	1,547,274	6·4	3·7	2·7
1877-81	4,415,178	2,802,310	1,612,868	6·4	4·0	2·4
1882-86	5,742,906	3,316,495	2,426,411	6·5	3·8	2·7
1887-91	7,159,762	3,896,907	3,262,855	6·6	3·6	3·0
1892	6,489,476	3,285,772	3,203,704	5·5	2·8	2·7
1893	7,656,374	5,947,851	1,708,523	6·3	4·9	1·4
1894	7,360,690	5,536,115	1,824,575	5·9	4·5	1·4
1895	7,305,786	6,079,755	1,226,031	5·8	4·8	1·0

It will be seen, from the statement last given, that New South Wales is still far from the position of being able to supply the wheat required for the food of its inhabitants, although from the following summary table it would seem that in this respect the country has made a decided advance since the earliest period referred to in the table. It is believed, however, that for the year ended March, 1897, the requirements of the population will be nearly met for the first time:—

Period for which an average has been taken.	Average per head per annum.		
	Consumption.	Home production.	Deficiency.
	bushels.	bushels.	bushels.
1862-66	6·2	2·5	3·7
1867-71	6·4	3·6	2·8
1872-76	6·4	3·7	2·7
1877-81	6·4	4·0	2·4
1882-86	6·5	3·8	2·7
1887-91	6·6	3·6	3·0
1892-95	5·8	4·2	1·6

The deficiency for the five years covered by the period 1887-91 was 3 bushels per head, equivalent to 46 per cent. of the whole consumption. During the four years extending from 1892 to 1895 the consumption of wheat per head was 5·8 bushels, which is somewhat under the average; and the deficiency was reduced to 1·6 bushels per head. The probable requirements for the year 1896, reckoning the consumption at 5·8 bushels per head, exclusive of seed, will be about 7,481,000 bushels; but in consequence of the drought the year's production has been only 5,195,000 bushels, hence the colony is compelled again to import on a large scale to supply the requirements of its population. In 1897 the requirements of the population will probably be about 7,651,000 bushels, and, with 870,000 acres sown for grain, it is estimated that the production will reach 8¾ million bushels—or about 100,000 bushels short of the consumption, after allowing for seed.

The average consumption of wheat in New South Wales, as shown above, amounts to 5·8 bushels per head—a rate which is higher than that of most countries the records of which are available for reference. The consumption includes what is used for all purposes except seed, a fact which must be borne in mind, as the quantity of flour used for the manufacture of biscuits and other articles, as well as for other than food purposes, is not inconsiderable.

WHEAT CROP OF THE WORLD.

The importance of Australasia in the wheat market of the world is not great, since out of a total production of about 2,309 million bushels raised in 1896 only about 25 million bushels, or 1·1 per cent., were Australasian. The following statement, the figures in which, with the exception of those referring to the Australasian colonies, have been taken from a return published in the *Miller*, shows the result of the wheat crop for 1896. The yield of the Argentine and Uruguay has been estimated. In regard to Australasia, the results of the 1895-6 crop are given. This season was a bad one, and so far as present indications go that for 1896-7 will be little better, excepting in New South Wales:—

Country.	Bushels.
Europe—	
France	336,000,000
Russia, Poland, Caucasia, and Siberia	336,000,000
Austria-Hungary, Croatia, and *Slavonia*	184,000,000
Germany	100,000,000
Italy	134,400,000
Spain and Portugal	84,000,000
Danubian Provinces and Turkey in Europe	144,800,000
United Kingdom	56,000,000
Holland and Belgium	25,600,000
Switzerland and Scandinavia	13,200,000
Europe (*continued*)—	
Greece, Cyprus, Malta, &c.	7,200,000
America—	
United States and Canada	464,000,000
Argentine and Uruguay*	72,000,000
Mexico and Chili	32,000,000
Asia—	
India	180,000,000
Turkey, Persia, and Japan	80,000,000
Africa	34,400,000
Australasia	25,114,000
Total	2,308,714,000

* Estimated.

The total production of wheat in North America for 1896 was about 58,000,000 bushels less than that for 1895, and 42,000,000 bushels less than in 1894. The crop in South America has been increasing. In 1891 the yield from this part of the globe was about 71,000,000 bushels, while in 1896 it was nearly 104,000,000 bushels, due mainly to the increased area put under wheat in Argentina and Uruguay. Europe produced the smallest yield since 1892, the quantity being nearly 72,000,000 bushels less than in 1895. Asia, however, showed an increase as compared with the previous year's yield, the production in 1896 being 260,000,000 bushels, as against 208,000,000 in 1895. In Africa the crop of 1896 was the largest since 1892.

Notwithstanding the abnormally high American returns, their effect upon the world's supply is only of temporary duration. In average years the importing countries of Europe require a supply of about 200,000,000 bushels, which the exporting countries are not always able to furnish; and it is an acknowledged fact that in the United States the growth of the population is proportionally greater than the increase of area sown to this cereal. In Russia and in Central Europe the consumption of wheat is increasing among populations that were in former years satisfied with grain of an inferior description, while there is throughout the world a tendency to a reduction of the area under wheat cultivation, the decrease being estimated at 5,000,000 acres. The great increase in the breadth of land sown to wheat during recent years in the Argentine Republic was a surprise to many; but the peasants who emigrate to South America from Italy and Spain should naturally be expected to follow in their new home the only avocation which they and their forefathers knew in the Old World. It is estimated that during the current year the importing countries will require something like 370,000,000 bushels, of which the United Kingdom will take more than half; while the supplies are estimated at practically the same figure, 140,000,000 bushels being looked for from the United States and Canada, 104,000,000 bushels from Russia, 72,000,000 from from the Danubian Provinces, 32,000,000 from Argentina and Uruguay, and the balance from other countries.

Australasia, and in particular New South Wales, possesses immense areas of land now devoted to sheep rearing that could be much more profitably used for wheat cultivation, which, in these days of depression, would give welcome employment to a large number of men. No doubt the Southern Hemisphere is destined some day to provide its share of the wheat requirements of the world. The low price of the cereal has been in many cases a drawback to the progress of its cultivation in New South Wales, but with the retention of part of the advance which the diminished supplies of the last two years have caused, farmers should find sufficient inducement to sow a larger area to this cereal.

PRICE OF WHEAT.

The price of wheat is subject to constant fluctuation, as the following table, giving the average rates ruling in the Sydney market in the months of February and March of each year since 1864, will show. These figures exhibit clearly the tendency to a gradual reduction in the value of the cereal, the rate for 1895 being the lowest of the series. As New South Wales has never grown sufficient wheat for home consumption, the price in Sydney is generally governed by the rates obtained in the neighbouring Australian markets, where a surplus is produced. These, again, are now determined by the figures realized in London, which are usually equal to those ruling in Adelaide, plus freight and charges. The prices in the following table are for an Imperial bushel, and, being for new wheat, are slightly below the average for the year:—

Year.	February.	March.	Year.	February.	March.
	per bushel. s. d.	per bushel. s. d.		per bushel. s. d.	per bushel. s. d.
1864	7 0	7 6	1881	4 1	4 3
1865	9 6	9 7½	1882	5 5	5 6
1866	8 4½	8 0	1883	5 1½	5 2
1867	4 3	4 4	1884	4 3	4 3
1868	5 9	5 9	1885	3 10½	3 7½
1869	4 9	4 10	1886	4 3½	4 5
1870	5 0	5 1½	1887	3 10	3 11
1871	5 7½	5 9	1888	3 6	3 6½
1872	5 0½	5 3	1889	4 9	5 3
1873	5 1	5 8½	1890	3 6	3 6
1874	6 9	6 1½	1891	3 7½	3 10
1875	4 7½	4 6	1892	4 9	4 9
1876	5 1½	5 6	1893	3 6½	3 6
1877	6 1½	6 6	1894	3 0	3 0
1878	6 1½	5 7½	1895	2 5	2 7
1879	5 0	4 9½	1896	4 4	4 4
1880	4 8	4 9			

COST OF GROWING WHEAT.

The cost of raising wheat depends entirely upon the size of the holding. A large farm with first-class agricultural appliances is capable of being worked at nearly half the cost of a small one, and in cases where the initial expenses of suitable machinery have been disbursed, the cost of production varies from 1s. to 1s. 3d. a bushel. An estimate of the cost of growing wheat ought to include rent, or interest on purchase-money of land, and carriage to the point of consumption.
so extensive as that over which wheat-growing is pursue
Wales, a separate estimate of these items is well nigh im
is evident that they tend to a fixed quantity, for

reaching market are large, and the cost inconsiderable, rent is high; and where conditions are unfavourable, rent is correspondingly low. Leaving out of consideration rent, interest, and carriage, the cost of growing wheat in New South Wales is approximately as follows:—

	s.	d.	
On large farms with first-class appliances	15	6	per acre.
On moderate-sized farms with good appliances ...	20	0	„ „
On small farms	27	0	„ „

The rates given include seed, expenses incurred in the preparation of land for cropping, and in sowing and harvesting, as well as depreciation in stock and appliances. The cost of bags is, however, not included.

WHEATEN HAY.

Wheat is also grown in considerable quantities for hay and dry fodder for cattle, and the area cut for hay is steadily increasing, although, of course, it is largely dependent upon the fitness of the crops to be reaped for grain. The produce, however, is still short of the requirements of the colony. The following statement shows the area of wheat-lands cut for hay, with the yearly produce, during the last nineteen years:—

Year ended March 31.	Area.	Yield.		Year ended March 31.	Area.	Yield.	
		Total	Average per acre.			Total.	Average per acre.
	acres.	tons.	tons.		acres.	tons.	tons.
1878	29,640	29,137	0·98	1888	60,340	70,392	1·16
1879	22,888	31,320	1·36	1889	102,838	42,041	0·41
1880	25,281	32,943	1·30	1890	82,880	140,348	1·69
1881	41,137	44,037	1·07	1891	83,827	96,014	1·15
1882	39,428	42,378	1·07	1892	66,435	75,883	1·14
1883	42,592	43,997	1·03	1893	89,396	116,061	1·30
1884	49,348	55,119	1·12	1894	101,875	100,482	1·00
1885	86,584	87,328	1·01	1895	125,797	136,837	1·10
1886	105,122	74,606	0·71	1896	172,614	99,679	0·58
1887	74,070	109,851	1·48				

From the foregoing figures it will be seen that the cultivation of wheat for hay is increasing in a much greater ratio than that for grain, the area so cultivated in 1888-9 having been six times that cultivated for the same purpose in 1877. From that year the area devoted to hay did not, until 1895, reach those figures, the seasons generally being so propitious that a greater proportion than in former years was allowed to come to grain. That season, however, showed an increase of 23,922 acres reaped for hay over an area similarly treated in the agricultural year 1893–4, and in the following year, in consequence of the drought, there was a further increase of no less than 46,817 acres. A long series of dry years may in some measure account for the increased area devoted to hay; but the steady demand both for hay and chaff, wheaten as well as oaten, and the large import of this produce, fully justify an extension of its cultivation. There still exists a considerable difference between the demand for hay and the supply from within the colony, as there was in 1895 a net import of 56,994 tons of hay and chaff, principally for consumption in the Metropolitan district, but this difference is well within the capacity of the colony to produce.

The total area under wheat in 1895–6, both for grain and for hay, was 769,298 acres, producing 5,195,312 bushels of grain and 99,679 tons of hay, the value of both kinds of produce being £1,458,923.

MAIZE.

The cultivation of maize is almost as important as that of wheat, and forms the staple industry in the valleys of the coastal rivers, which are peculiarly adapted, both with regard to soil and climate, for the growth of this cereal. On the table-land also its cultivation is attended with fair results, but as the land rises in elevation so does the average yield per acre proportionately decrease. Attempts have been made to grow maize in the western division of the colony, but success has been met with only under special conditions of natural or artificial irrigation, for the plant demands a considerable amount of moisture, and thrives better in the humid climate of the coast than anywhere else in the country. Although the area under maize is much less than that under wheat, the gross yield obtained, measured by bushels, is frequently as large as that of the latter cereal, and in some seasons even greatly in excess of it.

The area under maize-culture has increased from 57,959 acres in the year 1862 to 211,104 acres in 1896, and has, therefore, nearly quadrupled within thirty-four years. Considered in the light of the general advance of settlement, particularly in those districts where maize may be successfully cultivated, there is nothing remarkable in the progress here exhibited, especially as there is no lack of land in New South Wales fit for the cultivation of this cereal. It is, nevertheless, worthy of notice that in the year 1888 an additional area of 24,705 acres was laid down with maize for grain—a much greater increase than was shown during any of the previous twenty-five years, with the exception of the year 1879, when 25,072 acres were added to the area under maize. For the next five years the area fluctuated considerably, and in 1893 it showed a decrease of 23,603 acres on the figures of 1891, many farmers, discouraged by the low price realised for the cereal, putting their land to other uses. The year 1894, however, experienced the notable increase of 38,336 acres, or over 22 per cent. on the figures for 1893; while in 1895 there was a further increase of 2,423 acres, and in 1896, of 2,796 acres.

The state of maize cultivation in the colony during the period from 1863 to 1896 is shown in the following table. The average yearly acreage and production are given in quinquennial periods, and annually since 1888, the agricultural year ending on the 31st March:—

Period or year.	Area under crop.	Production.	
		Total.	Average per acre.
	acres.	bushels.	bushels.
1863–67	101,245	3,047,478	30·1
1868–72	118,301	3,629,468	30·7
1873–77	117,155	3,804,463	32·5
1878–82	123,160	4,316,819	35·0
1883–87	127,416	4,029,410	31·6
1888–92	175,466	5,330,653	30·4
1893–96	198,214	5,854,349	29·5
1888	171,662	4,953,125	28·8
1889	166,101	4,910,404	29·5
1890	173,836	5,354,827	30·8
1891	191,152	5,713,205	29·9
1892	174,577	5,721,706	32·8
1893	167,549	5,037,256	30·0
1894	205,885	7,067,576	34·3
1895	208,308	5,625,533	27·0
1896	211,104	5,687,030	27·0
Average yield for thirty-four years...................			31·3

The yield per acre is a somewhat variable item, ranging from a minimum of 21·8 bushels, which was obtained in the year 1871, to a maximum of 38·1 in 1870, but when taken periodically, as in the foregoing table, the result is more satisfactory, the range being only from 29½ to 35 bushels per acre.

The next statement shows the distribution of the area under crop for maize during the season 1895–6, with the total and average yield in each division:—

Division.	Area.	Production.	Average yield.
	acres.	bushels.	bushels.
The Coast—			
Northern District	99,323	3,482,725	35·0
Central ,, ...	31,882	717,889	22·5
Southern ,, ...	13,559	391,920	28·9
The Table-land—			
Northern District	18,586	398,201	21·4
Central ,, ...	25,023	341,387	13·6
Southern ,, ...	15,922	259,941	16·1
The Western Slope—			
Northern District	5,249	89,956	17·1
Central ,, ...	554	3,485	6·3
Southern District and Valley of the Murray	997	1,388	1·4
The Western Plains	9	138	15·3
Total	211,104	5,687,030	27·0

From this table it will be seen that the north coast is the most important maize-growing district, yielding last season 61 per cent. of the total production of the colony, with an average 6·1 bushels and 12·5 bushels per acre higher than in the south and central coast districts respectively, the latter division including the valleys of the Hunter, the Hawkesbury, and the Nepean Rivers, and the metropolitan county of Cumberland. In the north and south coast districts maize is cultivated extensively in every county, the highest total yield coming from the county of Macquarie, with 887,226 bushels, and the highest average yield from the county of Raleigh, with 45 bushels. On the southern table-land about three-fourths of the production of the division is grown in the counties of Wynyard and Buccleuch, the rich yields of the Tumut district being the highest per acre of any in the colony.

The estimated annual average yield of the world's crop of maize is stated to comprise 2,300 million bushels, of which quantity New South Wales produces less than the four-hundredth part.

The following table, compiled for the purpose of showing the annual movement of the maize market for the last ten years, also shows the yearly requirements for home consumption :—

Year.	Production.	Import.	Export.	Excess of— Import.	Excess of— Export.	Consumption.
	bushels.	bushels.	bushels.	bushels.	bushels.	bushels.
1886	3,825,146	94,673	196,996	....	102,323	3,722,823
1887	4,953,125	272,104	337,204	....	65,100	4,888,025
1888	4,910,404	152,010	342,093	....	190,083	4,720,321
1889	5,354,827	237,660	366,063	....	128,403	5,226,424
1890	5,713,205	563,721	30,811	532,910	....	6,246,115
1891	5,721,706	290,786	17,626	273,160	....	5,994,866
1892	5,037,256	324,949	19,326	305,623	....	5,342,879
1893	7,067,576	166,841	12,270	154,571	....	7,222,147
1894	5,625,533	58,027	11,733	46,294	.. ..	5,671,827
1895	5,687,030	2,489	42,296	....	39,807	5,647,223

The future of this branch of agricultural industry seems limited to the supply of local wants, as New South Wales is adjacent to several maize-producing countries which are already commencing to compete against her in her own markets. Until 1890 the colony produced more than could be locally consumed, and exported a small quantity to her southern neighbours; but in that year, owing to a sudden increase in the demand for maize, the reason for which was not apparent, the large production would seem to have been insufficient, a net quantity of 533,000 bushels of grain having been imported in the course of the twelve months. This import, though on a smaller scale, continued until 1895, when there was again a net export of the grain, the quantity being about 40,000 bushels. Of the gross export of 42,000 bushels, 31,000 bushels were consigned to Queensland—where the production during 1895–6 fell short of the preceding year's yield by nearly a quarter of a million bushels,—and 7,000 bushels to New Caledonia, also a maize-growing country.

As the deficiency in production between 1890 and 1894 had not the usual result of causing a sensible increase in the prices paid to the New South Wales farmers, it is a matter of some doubt whether the importations made had not for their object the keeping of a stock of grain in the hands of dealers sufficient to prevent a hardening of the wholesale rates. In such case the deficiency in the production would seem to have been more apparent than real. However this may be, it does not seem probable that this branch of farming can be expanded with much profit to the growers, unless the local consumption should considerably increase.

Maize is not only cultivated as a grain crop, but a small area is sown for green food for cattle, chiefly on dairy farms. In 1895–6, the area thus cultivated was 13,192 acres. The total area under maize during this season was 224,296 acres.

OATS.

This cereal is cultivated as a grain crop, principally in the wheat-growing districts of the colony; and as it is essentially a produce of cold climates, it thrives best in those parts of the country which have a winter of some severity. The average yield of the colony for 1895–96 was 15·8 bushels per acre—the lowest yield since 1888–89. The table-land is the principal centre of cultivation, but though the acreage under the cereal is greatest in the central portion, the northern district gives the best return. The northern tableland averaged 26·2 bushels; the central, 16·6 bushels; and the southern, 8·9 bushels;—these districts producing 260,440 bushels of the grain out of a total yield of 374,196 bushels. On the southern-western slope 85,880 bushels were produced, the average yield being 16·2 bushels to the acre; and 11,217 bushels from the north coast, 6,337 bushels from the Hunter and Hawkesbury Valleys, and 5,242 bushels from the central western slope, practically complete the production.

The following table illustrates the state of the cultivation of oats since 1863. The average yearly acreage and production are given in quinquennial periods up to 1896, and annually since 1889—the agricultural year ending March 31:—

Period.	Area.	Production.		Year.	Area.	Production.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels.
1863–67	12,592	204,979	16·3	1889	7,984	109,931	13·8
1868–72	13,410	224,534	16·7	1890	22,358	543,330	24·3
1873–77	17,753	340,286	19·1	1891	14,102	256,659	18·2
1878–82	19,772	407,277	20·6	1892	12,958	276,259	21·3
1883–87	20,032	460,003	22·9	1893	20,890	466,603	22·3
1888–92	15,359	316,188	20·4	1894	34,148	701,803	20·5
1893–96	27,356	526,332	19·2	1895	30,636	562,725	18·4
				1896	23,750	374,196	15·8

The cultivation of oats for grain has been very irregularly pursued during the period embraced by this table, rising rapidly during the earlier years and remaining practically stationary from 1878 until 1894, when over 13,000 acres were added to the area under crop during the preceding year. In 1896 the area cut for grain was 10,398 acres smaller than in 1894, but this was due to the failure of the crops, caused by the absence of rain, the area cropped for hay being 38,107 acres above the corresponding figure two years before. The market for oats is chiefly in the metropolitan district, and the demand depends largely upon the price of maize.

The average yield of oats during the period 1863–96 was 19·7 bushels per acre, the minimum obtained in any year being 10·6 bushels in the season 1865-6, and the maximum, 25·1 bushels in that of 1886-7. Compared with the other continental colonies, New South Wales holds, in regard to average yield, the second rank, Victoria coming first; but the oat yield of each of these colonies is surpassed by that of Tasmania and of New Zealand. The climate of the two colonies last mentioned is much better adapted for the successful cultivation of this grain, the average yield per acre in New Zealand in particular being little below that of the United Kingdom, and on a par with the best of the other oat-producing countries of the Old World. The average annual yield of oats throughout the globe is estimated at 2,328 million bushels.

In the following table figures will be found giving the average produce per acre in the Australasian colonies during the season 1895–6, and the mean average, together with the maximum and minimum yields, during the last ten years :—

Colony.	Average. 1895–6.	Yield per acre during ten years 1887–96.		
		Mean Average.	Maximum.	Minimum.
	bushels.	bushels.	bushels.	bushels.
New South Wales	15·8	20·4	25·1 (1887)	13·8 (1889)
Victoria	11·3	20·8	25·8 (1893)	14·2 (1889)
Queensland	11·8	18·4	24·3 (1888)	5·6 (1889)
South Australia	12·7	11·2	12·8 (1890)	6·4 (1892)
Western Australia.........	10·3	16·9	20·0 (1889)	12·4 (1895)
Tasmania	27·7	26·7	30·9 (1892)	18·2 (1888)
New Zealand	33·6	31·2	34·0 (1892)	28·7 (1891)

The cultivation of oats as a staple agricultural crop has been much neglected in New South Wales, though the return has not been unsatisfactory. It is possible that in the near future this grain will receive greater attention, especially as the deficiency between the production and the consumption is very considerable. The elevated districts of Monaro, Argyle, Bathurst, and New England, in preference to other parts of the colony, contain vast areas of land where the cultivation of oats could be carried on with remunerative results.

As the production is far from satisfying the wants of the colony, the importation is large, 816,045 bushels, of the estimated value of £73,987, being imported during the year 1895. New Zealand is the principal source of supply, the quantity obtained from that province being 670,371 bushels. Much yet remains to be done before the colony can be independent of outside assistance in regard to the supply of oats, as during the ten years ended 1895 the average quantity produced was only 26·9 per cent. of the amount consumed, and there was an ample market for the produce of 56,000 acres more than the average area reaped.

In connection with this subject it may not be generally known that the relative nourishment of oats exceeds that of either maize or wheat, weight for weight. If 100 be taken as the value of oats for fattening purposes, the respective values of equal weights of the cereals are:—

Oats	100
Wheat	70
Maize	62

And for equal measures:—

Oats	100
Wheat	131
Maize	107

In parts of the colony where the climate is not suitable for maturing the grain, a large area is sown for hay. The average area cut for this purpose during the five years 1877–81 was 70,973 acres, which increased to 104,977 acres in the next quinquennium. In 1887 the area stood at 126,488 acres, but from that time it fluctuated considerably, and never approached the same figure until 1896, when the acreage cut for hay was 120,857, the dry weather preventing the maturity of the crops for grain. Oaten hay, however, is in much demand, and sells readily at remunerative prices; and as there is less expense and lighter labour attached to this form of cultivation, the system of growing for hay is more in favour with the farmers than the cultivation of the grain. The areas under the two crops stood to each other in the following relation in the year 1895–6:—

	Acres.
Area under oats for grain	23,750
Area under oats for hay	120,857
Total	144,607

The area harvested for grain was only 16·4 per cent. of the total area sown with oats. The following statement shows the area under and the production of oaten hay, for the quinquennial periods 1877–81 and 1882–6, and for each of the last ten years:—

Period or Year ended March.	Area.	Production.	
		Total.	Per acre.
	acres.	tons.	tons.
1877–81	70,973	84,885	1·2
1882–86	104,977	115,525	1·1
1887	126,488	182,921	1·4
1888	86,451	96,126	1·1
1889	85,439	40,753	0·5
1890	103,129	156,920	1·5
1891	70,463	71,305	1·0
1892	76,589	86,077	1·1
1893	101,981	132,426	1·3
1894	82,750	94,128	1·1
1895	96,856	95,517	1·0
1896	120,857	79,635	0·7

In addition to the area cultivated for grain and hay, a small extent of land is yearly sown for green oaten fodder. Last season 4,702 acres of oat-lands were so used. The total area under oats during the year ended 31st March, 1896, was therefore 149,309 acres—an increase of 18,828 acres over the area of the previous season.

MINOR GRAIN CROPS.

The minor grain crops harvested are barley, rye, millet, and sorghum. Little can be said on this subject except that, as in the case of other cereals, the suitability of the soil for their production is an established fact. There is, however, so little demand for these kinds of grain that their cultivation in the colony is very limited.

In 1895–6 barley was sown on 11,877 acres, of which 7,590 acres were for grain, with a production of 96,119 bushels; 1,744 acres were for hay, with a yield of 1,398 tons; and 2,543 acres were for green fodder. The world's estimated annual average yield of barley is stated to comprise 802 million bushels.

The area under rye for grain in 1895–6 covered 753 acres, the produce from which was 8,078 bushels, or at the rate of 10·7 bushels to the acre. There were also 381 acres of rye sown for green food. The world's estimated annual average yield of rye is stated to comprise 1,317 million bushels.

Millet was only cultivated over an area of 1,733 acres, 865 acres of which were harvested for grain, the remaining 868 acres being sown for green food for cattle. The greater part of the crop of millet was obtained in the Hunter River Valley. The average production of the colony amounted to 13·7 bushels per acre.

The cultivation of sorghum for grain appears to have been abandoned, but the area sown in 1895–6 for green fodder for cattle extended over 13,794 acres, chiefly within the dairy-farming districts of the south coast.

A greater number of minor grain crops than those specified above were cultivated in the colony, but, owing to the small area tilled, were not specified in the agricultural returns.

PRODUCTION AND CONSUMPTION OF GRAIN.

The mean population of New South Wales during the decade extending from 1886 to 1895 was 1,121,592; the average annual production of grain of all kinds was 10,725,192 bushels; and the annual consumption was 14,703,961 bushels. There was, therefore, an average annual deficiency of all kinds of grain during the decade of 3,978,769 bushels. The average annual production per head of all kinds of grain in the colony was 9·5 bushels, and the consumption per head, inclusive of seed grains, 13·1 bushels, leaving a deficiency per head of 3·6 bushels, which had to be made good by importation. The following table exhibits the total production of the grain crops grown in the colony for the period under notice :—

Year ended 31st March.	Production of Grain.					
	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.
	bushels.	bushels.	bushels.	bushels.	bushels.	bush'ls.
1886	2,733,133	4,336,163	85,606	279,107	7,846	6,685
1887	5,868,844	3,825,146	132,949	600,892	17,784	4,749
1888	4,695,849	4,953,125	84,533	394,762	19,167	4,869
1889	1,450,503	4,910,404	36,760	109,931	5,982	6,917
1890	6,570,335	5,354,827	113,109	543,330	18,239	9,818
1891	3,649,216	5,713,205	81,383	256,659	9,129	2,417
1892	3,963,668	5,721,706	93,446	276,259	11,390	5,079
1893	6,817,457	5,037,256	91,701	466,603	20,356	3,732
1894	6,502,715	7,067,576	114,272	701,803	19,522	9,244
1895	7,041,378	5,625,533	179,348	562,725	13,315	12,460
Total for 10 years	49,293,098	52,544,941	1,013,107	4,192,071	142,730	65,970

The deficiency in the production of wheat, calculated on the basis of the past ten years, amounts to 35·5 per cent.; in that of barley, 33·5 per cent.; in that of oats, 73·1 per cent.; and in that of maize, 1·5 per cent. The total deficiency in all the principal grain crops during the decennial period was 27·1 per cent. There is no apparent reason why the local production of grain should not equal the demand; on the contrary, the resources of the colony are such that under normal conditions the supply should largely exceed the requirements, and an increasing excess of production become yearly available for export.

The table given hereunder shows the excess of imports over exports of grain during the decennium. Rye and millet have been omitted from the table, as neither of these grains is used in the colony to any extent, and there has been scarcely any export or import :—

Year ended 31st March.	Net Imports of Grain.			
	Wheat.	Maize.	Barley.	Oats.
	bushels.	bushels.	bushels.	bushels.
1886	3,675,383	*102,323	55,427	1,096,553
1887	2,502,960	*65,100	31,754	1,393,949
1888	3,722,806	*190,083	68,410	1,067,204
1889	5,080,438	*128,403	103,153	882,479
1890	1,867,381	532,910	45,862	1,459,173
1891	3,140,687	273,160	60,031	1,439,334
1892	3,203,704	305,623	48,641	1,324,276
1893	1,708,523	154,571	58,626	1,270,091
1894	1,824,575	46,294	34,223	686,275
1895	357,273	*39,807	5,140	787,477
Total for 10 years	27,083,730	786,842	511,267	11,406,811

* Net exports.

The total production, added to the total excess of imports over exports, will give the consumption, inclusive of seed grains, as shown in the subjoined table:—

Year ended 31st March.	Consumption of Grain.					
	Wheat.	Maize.	Barley.	Oats.	Rye.	Millet.
	bushels.	bushels.	bushels.	bushels.	bushels.	bushels
1886	6,408,516	4,233,840	141,033	1,375,660	7,846	6,685
1887	8,371,804	3,760,046	164,703	1,994,841	17,784	4,749
1888	8,418,655	4,763,042	152,943	1,461,966	18,984	4,869
1889	6,530,941	4,782,001	139,913	992,410	5,454	6,917
1890	8,437,716	5,887,737	158,971	2,002,503	18,198	9,818
1891	6,789,903	5,986,365	141,414	1,695,993	9,129	2,417
1892	7,167,372	6,027,329	142,087	1,600,535	11,390	5,079
1893	8,525,980	5,191,827	150,327	1,736,694	20,356	3,732
1894	8,327,290	7,113,870	148,495	1,388,078	19,522	9,244
1895	7,398,651	5,585,526	184,488	1,350,202	13,315	12,460
Total for 10 years	76,376,828	53,331,583	1,524,374	15,598,882	141,978	65,970

The experience of past years distinctly shows that New South Wales is, on the whole, better favoured as regards soil, climate, and other natural conditions than any other continental Australian province; and, consequently, the average yield per acre of wheat, maize, and barley is greater in the parent colony than in any of the remaining four, Victoria not excepted. Extending the field of comparison, the production of cereals is found to reach an average which places New South Wales on a level with countries usually considered as rich agricultural States. It is better than the average yield of the United States, Italy, and Hungary; and, in some respects, almost on a level with that of Germany, Austria, and France. The area adapted for cereal-growing is very considerable, and with a better knowledge of the capabilities of the various kinds of soil, and well-devised means of water-storage, there should be practically no limit to the production of grain.

STANDARD BUSHELS OF THE VARIOUS GRAINS.

The weight of a bushel of wheat varies from 57½ to 63 lb., according to grade; but the standards, as enforced by an Act of Parliament, assented to on the 10th February, 1880, for this and for other kinds of grain, are as follow:—

Wheat	60	lb. to the bushel.
Maize	56	,, ,,
Barley—Cape	50	,, ,,
,, English	52	, ,,
Oats	40	,, ,,
Rye	60	,, ,,
Peas	60	,, ,,
Beans	60	,, ,,

Tests, for milling purposes, of average samples of wheat from various districts of the colony, give an average weight of 66½ lb. to the bushel.

SOWN GRASSES, AS FOOD FOR CATTLE.

The area sown with green food and grasses for cattle is increasing in the colony, although in the course of the year 1895–6 there were under artificial grasses only 300,862 acres (including 15,925 acres of Crown lands) or 61,716 acres less than in 1894–5, and the smallest area since 1889–90. Lucerne is grown in considerable quantities on the Hunter River flats, and the cultivation of this fodder is extending throughout the country, principally along the banks of the rivers on the western slope of the Great Divide. The total acreage under lucerne in 1895–6 was returned at 24,081 acres cut for hay, producing 48,959 tons of fodder. In addition to this, there were 31,353 acres of lucerne and grasses sown for green fodder for cattle.

Permanent grasses are laid down principally in the north and south coast districts, 150,761 acres being thus cultivated in the latter division alone; while in the division of the north coast there were 84,982 acres under grass, of which 65,175 acres were laid down in the most northern county of Rous. There is also a considerable area under artificially-sown grasses for dairying purposes on the southern table-land, and to a less extent on the northern and central table-land, and also in the counties of Denison and Hume on the south-western slope; but in the other divisions of the colony the area is small, and cultivated by holders principally for their own use. It is in those portions where dairy-farming is principally carried on that the practice of laying down permanent grasses is most general.

The increasing demand for dairy produce, which is now to some extent being exported to the United Kingdom, has had a considerable influence upon the extension of the area under artificial pastures. The following table shows the progress made in this branch of farming during the last ten years, the area having increased from 146,787 acres in 1886-7 to 300,862 acres in 1895-6, while in some of the intervening years it has been much higher than the latter figure. The areas under these artificial pastures are also given for the north and south coast districts, where the dairying industry is most flourishing :—

Year ended 31st March.	Area under Artificial Grasses.			Year ended 31st March.	Area under Artificial Grasses.		
	New South Wales.	North Coast District.	South Coast District.		New South Wales.	North Coast District.	South Coast District.
	acres.	acres.	acres.		acres.	acres.	acres.
1887	146,787	26,349	101,593	1892	333,238	99,203	148,434
1888	192,678	30,621	146,854	1893	361,280	83,820	182,025
1889	200,332	31,520	155,197	1894	302,412	87,681	156,408
1890	217,403	39,950	166,057	1895	362,578	82,078	175,184
1891	388,715	86,592	172,251	1896	300,862	84,982	150,761

NATURAL GRASSES AND RING-BARKING.

The area ring-barked and partially cleared for the preservation of the natural grasses as food for stock was recorded in 1895-6 at 25,570,376 acres, 11,748,187 acres being on the western slope, 9,470,203 on the table-land, 1,945,534 acres in the coast districts, and 2,406,452 on the western plains. By far the largest area ring-barked was in the pastoral divisions, for grazing purposes for sheep, although farmers also, to some extent, resort to this method of increasing the food supply for their inferior stock, and even for cows in milking, supplementing the natural grasses with lucerne, sorghum, and other green foods.

POTATOES.

The cultivation of the potato has progressed very slowly, although the seasons 1894 and 1895 showed a marked increase in the industry. The area planted for the season ended 31st March, 1895, viz., 30,089 acres, was the largest ever recorded, and the total yield of 85,270 tons the highest in the history of the cultivation of the tuber in the colony. The average yield per acre was, however, only 2·83 tons; in the preceding year it was 3·16 tons—a return which had not been reached since the year 1880. In 1896, however, the area declined to 24,722 acres, and the production to 56,179 tons—the average yield being only 2·27 tons. At present New South Wales has to make up by importation from the other colonies a considerable deficiency, which amounted in 1895 to 47,380 tons net, or about 36 per cent. of the total consumption for the year.

The following table illustrates the state of the cultivation of potatoes for the quinquennial periods and years given :—

Period or year ended 31st March.	Area.	Production.	Average yield.
	acres.	tons.	tons.
1866–70	16,597	38,737	2·33
1871–75	14,327	40,967	2·86
1876–80	15,567	46,983	3·02
1881–85	15,374	41,642	2·71
1886–90	17,274	46,578	2·70
1891–95	23,423	67,257	2·87
1891	19,406	52,791	2·72
1892	22,560	62,283	2·76
1893	18,502	52,105	2·81
1894	26,559	83,838	3·16
1895	30,089	85,270	2·83
1896	24,722	56,179	2·27

The centres of potato cultivation are the counties of Bathurst (principally in the Orange and Carcoar districts), Argyle, King, Sandon, Camden, Clarence, and Durham, and, to a less extent, the other counties of the coast and table-land districts. On the western slope this root-crop has hardly any representation at all. Its cultivation is, however, capable of very wide distribution throughout the colony; but in many places formerly well known for its production it has been largely displaced by maize and other cereals.

TOBACCO.

Both the soil and climate of New South Wales are well fitted for the growth of the tobacco-plant, but as it demands for its proper cultivation special knowledge on the part of the grower, it is not so largely cultivated as it otherwise might be. The Government of the colony are endeavouring to remedy this state of affairs, and have engaged the services of an expert to assist the growers in the culture of the plant. In the year ended 31st March, 1864, the first shown in the subsequent table, there were only 534 acres under cultivation, producing 4,851 cwt. of leaf tobacco. In the following years the area under the plant largely increased, chiefly in the agricultural districts of Argyle and the Hunter River valley. Since then the growth of tobacco seems to have been almost entirely abandoned in the districts where it was first attempted; but it has spread to other parts of the colony, the counties of Wynyard, Bathurst, Roxburgh, Parry, Westmoreland, Buccleuch, and Georgiana being now the principal centres of production. The greater portion of the tobacco grown in 1895–6 was obtained in these districts, but its cultivation is chiefly in the hands of Chinese, few European agricultu [illegible] apparently possessing the knowledge required for the [illegible] culti and preparation of the leaf. According to the latest returns tobacco is cultivated on 184 holdings. The Census taken on the 5th April, 1891, recorded the total number of persons employed in the culture of tobacco as 388, and of these, 379, or 98 per cent., were Chinese. This fact shows to what a great extent the practice of growing and curing the leaf of the tobacco-plant has been abandoned to these aliens.

Between the years 1881 and 1889 the area devoted to the cultivation of tobacco was enlarged from 1,791 to 4,833 acres, with a corresponding increase in the yield of leaf. As, however, the local product did not compare favourably with the American leaf, it could not be exported profitably; so that a large proportion of the crop remained upon the farmers' hands, the quantity sold realised very unsatisfactory figures, and many growers consequently abandoned the cultivation of tobacco in favour of other crops. With the accumulation of stocks of leaf, and the fall in the price of the local product, the area under the plant and the resultant yield declined rapidly, and in 1893 the acreage was only 848, and the production 8,344 cwt. A better crop in the following season had the effect of increasing the production by 2,514 cwt., although only 6 acres more had been placed under cultivation. In 1895 both the area and the total yield were less than in any year since 1880; but in 1896 the area increased to 1,231 acres—the largest since 1890. The crop, however, suffered from the adverse season, and the production was barely up to that of 1894, when nearly 400 acres less were under cultivation.

The following table shows the progress of the industry during the last thirty-three years:—

Year ended March 31.	Area.	Production.		Year ended March 31.	Area.	Production.	
		Total.	Average per acre.			Total.	Average per acre.
	acres.	cwt.	cwt.		acres.	cwt.	cwt.
1864	534	4,851	9·1	1881	1,791	19,469	10·9
1865	807	4,036	5·0	1882	1,625	18,311	11·2
1866	1,499	7,469	5·1	1883	1,815	17,540	9·7
1867	1,326	2,478	1·9	1884	1,785	20,006	11·2
1868	627	6,035	9·1	1885	1,046	9,914	9·5
1869	875	7,925	9·1	1886	1,603	22,947	14·3
1870	366	3,192	8·7	1887	1,203	13,642	11·3
1871	225	700	3·1	1888	2,371	23,465	9·9
1872	567	4,475	7·9	1889	4,833	55,478	11·5
1873	440	2,751	6·2	1890	3,239	27,724	8·6
1874	199	1,261	6·3	1891	1,148	14,021	12·2
1875	539	6,069	11·3	1892	886	9,314	10·5
1876	491	4,098	8·3	1893	848	8,344	9·8
1877	333	2,440	7·3	1894	854	10,858	12·7
1878	399	3,049	7·6	1895	716	8,132	11·4
1879	835	7,932	9·5	1896	1,231	10,548	8·6
1880	592	6,221	10·5				

During the year 1895 there was a total consumption of manufactured tobacco and cigars of 3,195,585 lb. weight, of which 1,971,211 lb. were made in the colony from 636,287 lb. of American leaf and 1,334,924 lb. of leaf locally grown. The production of leaf for 1896 was equivalent to 1,181,376 lb., from which a third may be deducted for damage and waste, and the quantity left, viz., 787,584 lb., will represent nearly half the probable requirements of the home manufacturers.

The Department of Agriculture has of recent years taken steps to revive the interest of agriculturists in the industry, and in view of the fact that few countries are better favoured than New South Wales with climate and soil necessary for the successful cultivation of the plant, it is certainly a matter for regret that it should have been so quickly abandoned. The difficulty, however, is not so much with the producer as with the market. The local consumption could be rapidly overtaken, and the surplus production would then have to be placed on the English or foreign markets, where it would enter into competition with tobacco having a well-established reputation, and a flavour for which continued use on the part of the consumer has created a taste and a predilection.

SUGAR-CANE.

The first returns in which mention is made of the cultivation of the sugar-cane and the production of sugar in New South Wales date only from 1863–4. In that agricultural year two acres were recorded as having produced 280 lb. of sugar, and it will appear strange that out of this quantity 220 lb. were stated to be the produce of one acre of cane, grown in the northern part of the county of Bathurst, while the remaining 60 lb. were produced on the banks of the Macleay River. The district last mentioned may be considered as the principal seat of the industry during its earlier stages; but it proved to be unsuitable to the growth of the cane, and the risk of failure from frosts compelled the planters to keep more to the north. In a few years the richest portions of the lower valleys of the Clarence, the Richmond, the Tweed, and the Brunswick were occupied by settlers engaged in planting and growing the cane. Mills were erected in the chief centres of cane-cultivation, and cane-growing and sugar-manufacturing are now the principal and best-established industries of the north-eastern portions of the colony.

Although frosts are not altogether unknown even on the Tweed, the soil and climate of the valleys of the northern rivers are in most respects well adapted to the successful cultivation of the sugar-cane, and it is confined principally to the valleys of the Richmond, Tweed, and Clarence Rivers, and nearly the whole of the area under this crop lies within the counties of Rous, Clarence, and Richmond.

The following table shows the progress of this industry during the last twenty years. The figures relating to the area yearly placed under cane are given for earlier [illegible] number of tons produced cannot be ascertained prior [illegible] is not an annual crop, the area under cultivation has been divided, as far as practicable, into productive and non-productive, the former representing the number of acres upon which cane was cut during the season, and the latter the area over which it was unfit for the mill, or allowed to stand for another year:—

Year. ended 31st March.	Area.			Production of Cane.	
	Productive.	Non-productive.	Total.	Total.	Average per acre.
	acres.	acres.	acres.	tons.	tons.
1864	....	....	2	....	....
1865	....	....	22	....	....
1866	....	....	141	....	....
1867	....	....	116	....	....
1868	....	....	647	....	....
1869	....	....	2,584	....	....
1870	....	....	3,917	....	....
1871	1,475	2,607	4,082	....	....
1872	1,995	2,399	4,394	....	....
1873	3,470	2,001	5,471	....	....
1874	3,565	3,105	6,670	....	....
1875	4,087	4,453	8,540	....	....
1876	3,654	2,800	6,454	....	....
1877	3,524	3,231	6,755	99,430	28·2
1878	3,331	3,735	7,066	99,978	30·1
1879	2,949	4,489	7,438	104,192	35·3
1880	3,675	4,102	7,777	126,119	34·5
1881	4,465	6,506	10,971	121,616	27·2
1882	4,983	7,184	12,167	128,752	25·8
1883	6,362	7,176	13,538	169,192	26·6
1884	7,583	7,401	14,984	204,547	26·9
1885	6,997	10,520	17,517	105,323	15·1
1886	9,583	6,835	16,418	239,347	25·0
1887	5,915	9,202	15,117	167,959	28·4
1888	8,380	6,907	15,287	273,928	32·7
1889	4,997	10,284	15,281	110,218	22·1
1890	7,348	11,382	18,730	168,862	23·0
1891	8,344	12,102	20,446	277,252	33·2
1892	8,623	13,639	22,262	185,258	21·5
1893	11,560	15,191	26,751	264,832	22·9
1894	11,755	16,357	28,112	252,606	21·5
1895	14,204	18,705	32,909	264,254	18·6
1896	14,398	18,529	32,927	207,771	14·4

The figures contained in the above table show the gradual progress of the sugar-growing industry from the small beginnings of 1864. From the starting point of this cultivation there was but one single break (that of 1876), in the yearly increase of land put under cane until 1885. During the four succeeding years there was, however, a retrograde tendency, and the area cultivated in 1889 was less by 2,236 acres, or 12·7 per cent., than that cultivated in 1885. In 1890 there was an increase in the area under cane of 1,213 acres over the area similarly cultivated in 1885, the year for which, up to that time, the highest acreage had been recorded. This increase in the area planted has been proportionately maintained during the following years, the acreage under sugar-cultivation in 1896 being given as 32,927 acres. The low price of the staple and the disturbed state of the markets of the world a few years ago, forced the sugar-manufacturers to correspondingly reduce the price offered for the cane, and so caused for a time the abandonment of this cultivation by the small farmers, who found in the growth of maize less variable results for their labour. The crop of 1895–6 gave a yield of 207,771 tons of cane, but the average production per acre was only 14·4 tons—the lowest yield for which there is any record. The cane disease which has been prevalent, principally on the Clarence, accounts for the low average for the past four years, while in 1895–6 the crop was also damaged by frost.

Sugar-cane is generally cut in the second year of its growth, the fields being replanted after they have given crops for three or four seasons at the most; and, as the planting of cane has been conducted at irregular intervals, it has chanced that seasons of large production have been followed by small crops in the succeeding year. This accounts for the alternately large and small areas of productive cane during many years, as shown in the preceding table. Sugar-manufacturers invariably purchase the year's crop of cane standing and cut it at their own cost. From plantations in full bearing the average weight of the cane cut varies from 25 to 32 tons, while the price paid ranges from 8s. to 13s. per ton. For the season 1896 the leading buyer has fixed the price for the standing two-year old cane at 12s.; while the average cost of cutting the cane may be set down at 3s. 2d. per ton.

The county of Rous is now the principal centre of sugar-cane cultivation, containing 974 holdings, covering 20,184 acres, devoted to the production of sugar—an area comprising over three-fifths of the total acreage in the colony under cane crops. The yield obtained from 8,788 acres of productive cane amounted to 151,362 tons, showing an average of 17·2 tons per acre. In the county of Clarence there were, in 1895–6, 362 holdings on which cane was grown, the aggregate area being 8,958 acres. In this, as in the other sugar-growing counties, the majority of the farmers cultivate sugar-cane in addition to other crops, and only a few estates are entirely devoted to its production. Some planters have areas of from 25 to 100 acres in extent under cane, but th[illegible] is limited. The yield in the county of Claren[illegible] 38,6[illegible] n average of 10·1 tons per acre, cut on an area of 3,844 acres. In the county of Richmond the holdings under sugar-cane numbered 211, and aggregated 3,439 acres, of which 1,638 acres were cut, giving a total yield of 16,545 tons of cane, or an average of 10·1 tons to the acre. There were in the county of Fitzroy only 112 holdings under sugar-cane, with a total area of 239 acres, of which 91 were productive, giving a yield of 1,024 tons, or an average production of 11·3 tons to the acre. The county of Raleigh contained 14 holdings on which sugar-cane was cultivated, comprising an area of 69 acres, of which 34 were productive, giving a total production of 190 tons, or an average of 5·6 tons to the acre. In the southern coastal county of Camden there were 7 holdings, aggregating 29 acres, all of which was unproductive. In the whole of the remaining portion of the colony there were only 9 acres under cultivation. The total number of holdings on which sugar-cane was cultivated was 1,588.

The total consumption of sugar in New South Wales during the year 1895 amounted to 57,616 tons, of which 32,102 tons were the product of the local plantations. The quantity treated by the refineries of the colony, including imports, during the twelve months was 40,050 tons. The yield of sugar per ton of cane varies, of course, according to the viscidity of the juice, but in ordinary seasons it may be set down at somewhat over 9 per cent. of the quantity treated.

On the estates belonging to the Colonial Sugar Refining Company, the conduct of the business has been entrusted to practical men, and no money has been spared to obtain the most approved and complete plant for the manufacture of sugar. This Company's works on the Richmond River are among the most complete in any part of the world, and the sugar manufactured is equal to the best Mauritius and West Indian samples.

MINOR ROOT CROPS.

Among the minor root crops may be mentioned turnips, mangold-wurzel, onions, arrowroot, chicory, and beetroot. According to the agricultural returns collected during the season 1894–5, there were gathered in New South Wales £25,351 worth of miscellaneous crops, cultivated on 2,083 acres; and among these were some small areas, almost insignificant in their independent acreage, upon which were grown small yields of almost every agricultural product mentioned in this chapter.

The most important of the minor root crops is that of turnips, which show a total production of 1,088 tons from 303 acres. Onions, properly speaking a bulb crop, were recorded as having been grown on 183 acres, and the yield was 327 tons. Mangold-wurzel gave from 38 acres 107 tons. A little arrowroot is grown in the northern coastal district, and a little chicory in the central division of the table-land.

The sugar-beet, the cultivation of which in France and Germany has reached enormous proportions and has become a staple industry, is now attracting a good deal of attention both in New South Wales and in Victoria. In Victoria the Department of Agriculture has lately made some careful analyses of different varieties of locally-grown beets, with the most satisfactory results. A good beet should show not less than 12·5 per cent. of sugar, but those tested by the Department yielded 14·16, 14·87, 15·25, and 15·61 per cent. respectively. The Government of the colony have passed an Act under which the Treasurer is empowered to advance money on easy terms for the purpose of establishing mills for the production of sugar from beets. The results of the tests made in Victoria have, however, been greatly exceeded by those furnished by analyses of beets grown in the Tenterfield district of New South Wales. The chemist of the Colonial Sugar Refining Company, at the request of a local beet-grower, made a series of tests, the yield per root from those analysed being respectively 15·66, 16·08, 17·89, 19·51, 19·90, 20·13, 20·33, 20·56, 22·11, 22·22, and 24·75 per cent. Experts pronounce such yields to be unparalleled in the history of the cultivation of the beet; and there is, in consequence, a movement in favour of testing this branch of agriculture in those districts unsuited to the growth of the cane, special attention being directed to the matter in the Tenterfield district, where the project has taken practical shape. Should the cultivation of the beet for sugar production fulfil but half the expectations of its promoters, there is little doubt that it will greatly modify agriculture in the colony, and add another profitable staple to the country's resources.

LENTIL CROPS.

There were, during the season 1895-6, under crop to peas and beans, 657 acres, which gave a total yield of 17,347 bushels. The coastal division of the colony contained 365 acres devoted to this crop, and the yield was recorded as 12,847 bushels. The northern coast district yielded 994 bushels from 103 acres; the valleys of the Hunter and the Hawkesbury Rivers, 2,338 bushels from 101 acres; the metropolitan county of Cumberland, 8,918 bushels from 103 acres; and the southern coast district, 597 bushels from 58 acres. The area under this crop on the table-land was 274 acres, and the yield 4,233 bushels; to which the northern district contributed 428 bushels from 26 acres; the central, 2,003 bushels from 118 acres; and the southern, 1,802 bushels from 130 acres. The western slope had under this crop only 18 acres, yielding 267 bushels; to which the northern district contributed 21 bushels from 7 acres; the central, 50 bushels from 1 acre; and the southern, 196 bushels from 10 acres.

large local trade, together with an export trade of very considerable magnitude, have not yet awakened horticulturists to a sense of the importance of this valuable vegetable. There is an active and continually increasing demand for sauces, jams, and preserves of tomato, and the foreign supply is by no means so good or so cheap as to render competition difficult. In the future, perhaps, areas of many acres in extent will be planted with tomato-vines, as they now are with grape-vines, and numbers of people will be employed in the manufacture of tomato sauce, and in canning the fruit. Both climate and soil are favourable, and tomatoes grown in New South Wales compare to advantage with those produced in their native habitat.

VINES AND WINE PRODUCTION.

In almost every part of the colony, with the exception of the sub-tropical portion and the higher parts of the mountain ranges, grape-vines thrive well, and bear large crops of succulent fruit, equal in size, appearance, and flavour to the most renowned products of France, the Rhinelands of Germany, and Spain. Nevertheless, the vine-growing and wine-manufacturing industries are still in their infancy, though with a growing local demand, and the opening up of a market in England, where the wines of New South Wales, in common with those of the other Australian colonies, have obtained some appreciation, the future of grape culture in this country appears to be fairly assured. At present, however, the production of the whole of Australia is comparatively insignificant, as will appear from the following table, showing the vintage of the world for 1895 :—

Country.	Production in million gallons.	Country.	Production in million gallons.
France	587	Bulgaria	26
Italy	469	United States	19
Spain	379	Servia	18
Algeria	83	Russia	16
Germany	80	Brazil	8
Roumania	69	Azores, Canaries, and Madeira	5
Austria	66	Tunis	4
Hungary	63	Cape Colony	2
Turkey and Cyprus	53	Mexico	2
Portugal	44	Persia	1
Greece	35	Australia	4
Chili	33		
Argentine Republic	30		
Switzerland	27	Total	2,123

The vine was planted in the early days of colonisation in New South Wales, but it was not until the year 1828 that vine-growing and wine-making may be said to have been fairly established. In that year Mr. Busby returned from Europe with a large collection of cuttings from the most celebrated vineyards of France, Spain, the Valley of the Rhine, and other parts of the Continent of Europe; and planted on his estate at Kirkton, in the Hunter River district, a vineyard, which has been the nursery of the principal vineyards of the colony. Some years afterwards the vine was planted in the Murray River Valley and in other districts, and was found to flourish so luxuriantly that the manufacture of wine received considerable attention. For a time, however, the prospects of this industry seemed very discouraging, and the production was considerably diminished, owing partly to the want of a market, and partly to the fact that the wine-makers, many of whom were not vignerons by training, possessed only a limited knowledge of the manufacture of wine, and produced at first an article of inferior and unsaleable quality. In the principal vineyards in the Valleys of the Murray and Hunter Rivers, however, neither pains nor money has been spared to introduce skilled labour, and to put up presses, vats, and other manufacturing appliances of the most approved kinds.

The results of such intelligent treatment became apparent when prizes were awarded to the wines of New South Wales at the Paris Exhibition of 1878, followed by an unbroken series of successes at the Exhibitions of Philadelphia, Sydney, Melbourne, and Amsterdam; and still more recently at the Indian and Colonial Exhibition in London. But nowhere was the general excellence of the wines of the colony more fully recognised than at the Bordeaux Exhibition of 1882. There, in the principal centre of the wine trade of the world, some of the wines of New South Wales were classed, by the most competent judges, in the category of *Grands Vins*, and their value fully appreciated and established. Again, at the World's Fair, held in 1893, at Chicago, an international jury of experts pronounced the wines of New South Wales to be equal to many of the finest viticultural productions of the noted wine-growing countries of Southern Europe. The opinion was expressed, however, that the practice of labelling Australian wines with European names was to be deprecated, as they possessed many excellent and distinctive characteristics, sufficiently peculiar to justify the adoption of a new and descriptive system of classification.

Notwithstanding the winning of exhibition medals and expert approval, the export of the wines of the colony has not yet reached an important figure, although the prospects of the trade are said to be improving. Among other causes which retard the acceptance of Australian wines by English markets, may be mentioned the practice of shipping the product at too early an age, and the impossibility of obtaining from the shippers details respecting the vintage of any particular wine. It is, moreover, alleged that when certain shipments of wine arrived in England they were often so badly looked after as to be actually unsound before being shown to the wine merchant. Foreign experts find fault also with the method of casking, and recommend the preliminary treatment of wine in Australia, as it is treated in Bordeaux, with cool cellarage, fining, racking, and blending, for two years and a half to three years prior to leaving the country. No doubt much of the success of New South Wales as a wine-exporting country will depend on the adoption of more advanced methods, the more general employment of European experts in wine-making, and the enterprise of the vignerons in properly advertising their productions and bringing them sufficiently before the notice of the British public.

The total imports of all Australian wines into the United Kingdom, as recorded by the Board of Trade returns for ten years, were as follow:—

Year.	Gallons.	Year.	Gallons.
1886	148,000	1891	382,000
1887	168,000	1892	461,000
1888	233,000	1893	555,000
1889	307,000	1894	399,000
1890	314,000	1895	613,000

The possibilities of the wine trade, correlative with an improvement in manufacture, may be appreciated from the following figures, which exhibit in some detail the imports of wine into the United Kingdom during the year 1895. The quantities represent both wine in cask and in bottle:—

Country.	Gallons.	Country.	Gallons.
France	6,060,664	United States	146,080
Spain	4,057,015	Madeira	95,671
Portugal	3,363,451	British South Africa	12,090
Australasia	612,797	Other countries	172,375
Holland	550,799		
Italy	414,078	Total	15,864,323
Germany	379,303		

Of the total quantity imported, there were 10,880,065 gallons of red, and 4,984,258 gallons of white wine. The imports from France comprised 4,436,737 gallons of red, and 1,623,927 gallons of white wine; the imports from Portugal, 3,351,782 gallons of red, and 11,669 gallons of white; and those from Spain, 2,254,371 gallons of white, and 1,802,644 gallons of red wine.

Vignerons have been much exercised recently with the problem of the pasteurization of wines for export. By this process the wines are submitted to a temperature of from 140° to 150° Fahrenheit, thereby fixing the characteristics of a product, annihilating the destructive germs that lead to its deterioration, and making it impossible for them to reinvade it; but hitherto the experiments in this direction have been only tentative.

From the foregoing it will be seen that the export of the wines of New South Wales, about which so much has been written, does not seem to give very encouraging results; in fact, the trade is a very small one, and has decreased from 54,143 gallons sent away from the colony in 1891 to 21,557 gallons in 1895. The quantity sent last year to the United Kingdom amounted to 6,249 gallons, or 13,045 gallons less than that exported in 1892, when the export amounted to 19,294 gallons. During some years a considerable quantity of wine was sent away in wood from the Albury and Riverine districts to the neighbouring colony of Victoria, presumably for shipment at Melbourne. In 1891, when the export of the wine produced in New South Wales amounted to 54,143 gallons, the trans-Murray consignments totalled 38,548 gallons of the quantity exported. This intercolonial export has now, however, fallen to insignificant proportions.

In the following table will be found particulars of the export trade in wine locally produced, for the five years extending from 1891 to 1895:—

Country.	1891.	1892.	1893.	1894.	1895.
	gallons.	gallons.	gallons.	gallons.	gallons.
United Kingdom	9,451	19,294	17,941	12,038	6,249
Victoria	38,548	50	298	7,162	4,156
New Zealand	1,061	1,860	1,174	2,082	3,500
India and Ceylon	480	854	1,002	2,292	2,339
Queensland	1,552	1,981	1,751	2,487	2,239
South Sea Islands	934	1,466	1,363	1,704	2,019
British New Guinea, Singapore, Java, the Philippine Islands, the Straits Settlements, and Siam	......	......	4	404	619
Tasmania, South Australia, Western Australia, and Norfolk Island	614	395	135	254	201
New Caledonia	1,336	1,595	1,510	379	88
Japan, China, and Hong Kong	24	52	32	867	80
France, Belgium, Germany, and Italy	139	301	193	94	67
Canada and the United States	4	......	365	623	......
Egypt and the Mauritius	......	9	......	......	......
Total	54,143	27,857	25,768	30,386	21,557

During the year ending the 31st March, 1862, the wine produced in New South Wales measured 85,328 gallons; in 1866, the production reached 168,123 gallons; in 1876 it had increased to 831,749 gallons; in 1886 the production was only 555,470 gallons; and in 1896 it reached 885,673 gallons. The highest production was obtained in 1893, the quantity totalling 931,542 gallons—45,869 gallons more than in 1896, although the area in the latter year was greater by 244 acres. Vignerons consider 250 gallons per acre a good yield, but the average yield for New South Wales reached this figure only in one year since the establishment of the industry, viz., in 1876, when the average yield per acre was recorded as 263 gallons.

The following statement shows the progress of the industry since 1863:—

Year ended 31st March.	Total area under vines.	Area under vines for wine-making only.	Production.		Year ended 31st March.	Total area under vines.	Area under vines for wine-making only.	Production.	
			Total.	Average per acre.				Total.	Average per acre.
	acres.	acres.	gallons.	galls.		acres.	acres.	gallons.	galls.
1863	1,460	795	144,888	182	1882	4,027	2,597	513,688	198
1864	1,641	880	136,976	156	1883	4,448	2,629	543,596	207
1865	1,849	945	161,299	171	1884	4,378	2,560	589,604	230
1866	2,126	1,243	168,123	135	1885	4,584	2,405	442,612	184
1867	2,281	1,358	242,183	178	1886	5,247	2,876	555,470	193
1868	2,532	1,483	285,283	192	1887	5,840	3,131	601,897	192
1869	3,117	1,917	412,587	215	1888	6,745	3,292	666,382	202
1870	3,907	2,039	460,321	226	1889	7,072	3,596	805,813	225
1871	4,504	2,371	342,674	145	1890	7,867	3,603	688,685	191
1872	4,152	2,466	413,321	168	1891	8,044	3,896	842,181	216
1873	4,090	2,568	451,450	176	1892	8,281	3,846	913,107	237
1874	4,547	3,183	578,985	182	1893	8,264	4,146	931,542	225
1875	4,308	3,077	684,258	222	1894	7,375	4,130	748,929	181
1876	4,459	3,163	831,749	263	1895	7,577	4,475	731,683	164
1877	4,457	3,217	799,709	249	1896	7,519	4,390	885,673	230
1878	4,183	3,027	708,431	234					
1879	4,237	3,024	684,733	226					
1880	4,266	3,091	733,576	237	Mean for 34 years ...				205
1881	4,800	2,907	602,007	201					

The above figures show that the wine industry has very considerably increased during the period under review, the total area planted being now nearly seven times what it was in the year 1862, when it stood at 1,130 acres, from 562 acres of which grapes were gathered for wine-making, the total production being 85,328 gallons. The yields for the years 1876, 1877, 1880, 1892, and 1896 were the best of the series. The total number of vine-growers in 1896 was 2,036. The average area of each vineyard was 3·7 acres; and the area planted with vines still in an unproductive state was 642 acres.

In connection with the wine-making industry there was during the season 1895-6 a manufacture of 7,149 gallons of brandy, which was not, however, distilled for local consumption, but for the purpose of fortifying wines.

The wine industry is unquestionably hampered in its development by many things, including phylloxera vastatrix, oidium, anthracnose, caterpillars, and other pests. Phylloxera has caused some damage in the vineyards of the neighbouring colony of Victoria, seriously threatening the stability of the industry, and necessitating stringent legislative measures. It has appeared also in some vine

Camden, Seven Hills, and Parramatta districts, but so far without causing any great ravages, although some alarm exists among wine growers touching its development in the future. The knowledge that this pest has obtained a foothold in the colony, however slight it may be, has certainly stopped investment in vineyard properties, and has greatly damped the enthusiasm of those interested in the wine trade. At present the afflicted areas are confined to isolated patches, but this is quite enough to cause the gravest apprehension. A commission was appointed a few years ago to report on the appearance of the disease, and the best means of preventing its spreading throughout the vineyards of the colony. The prohibition of the importation of vine-cuttings from abroad has been in force for some time, and the destruction of infested vineyards has been carried out under the direction of the Vine Diseases Board; but vignerons recommend direct legislative action under a more stringent Act than that at present in operation. It is interesting to note that, in consequence of the greater attention that vignerons in France have had to devote to the vines in order to combat the ravages made by the phylloxera, the last state of the vineyards in that country is said to be better than the first.

In order to advance the interests of the wine-growing industry in New South Wales, experts advise the restriction of the choice of vines to a few well-tried and sound varieties, careful fermentation, the preservation as far as possible of constant types, attractive bottling, and a moderate price-list which should not make a good product prohibitive. A comprehensive Wine and Fruit Pest Act, and a strictly enforced Food Adulteration Act, are also deemed necessary. In order to perfect the knowledge of vignerons in the manufacture of wine, it is suggested that a College of Viticulture, on a basis similar to that of the Agricultural College, should be established for the purpose of imparting to intending wine-growers a capable training. The college should be under the direction of a competent viticulturist, should have attached to it a vineyard of some extent, and should be furnished with a well-organised cellar, and an œnological laboratory, where analyses of must wine and every experiment relating to wine-making could be conducted, with a view to subsequent publication of results. Were these suggestions carried into effect, there can be little doubt that there would be a marked improvement in the prospects of the wine industry.

TABLE-GRAPES AND RAISIN-FRUITS.

The culture of grapes is not restricted to the production of fruit for the purposes of wine manufacture only, for a considerable area is devoted to the cultivation of table-grapes, particularly in the neighbourhood of Sydney, and in Ryde, Parramatta, and other districts of Central Cumberland. The extent of country devoted to this branch of the i[illegible]892–3 comprised 2,211 acres, with a production of 5,916 [illegible] an average of 2·7 tons of fruit per acre. In

1893–4 the area yielding table-grapes was 2,131 acres, with a production of 3,216 tons, or an average yield of 1·5 tons to the acre. This showed a marked diminution in yield per acre, together with a decrease in the area under culture. In 1894–5 the number of acres cultivated numbered 2,358; and the production was 4,617 tons, or an average yield of about 2 tons to the acre; while in 1895–6 the area increased to 2,487 acres, and the production fell to 4,017 tons, the average yield being 1·6 tons per acre.

So far no effort has been made in New South Wales to prepare raisin-fruits for foreign consumption, although there are undoubted possibilities for a large export trade in this direction. In Victoria and South Australia, settlements have been founded at Mildura and Renmark for the purpose of cultivating, drying, and preserving fruit on a large scale, both for a local and an export trade, similar to the industry as it is conducted in California, where the lands are artificially irrigated, and the efforts of nature are seconded by the discoveries of modern science. Experiments made in drying grapes and currants of Australian culture have met with success in the London markets, and experts have declared the product to be of the highest quality. New South Wales is, perhaps, even more favourably situated for the prosecution of this industry than either of the sister colonies, and with the extension of settlement, and the falling out of cultivation of such products as are more cheaply grown in other and more suitably climatic parts of the world, the building up of a large export trade in raisins, muscatels, dried currants, figs, and other staples peculiar to the isles of the Levant and the Grecian peninsula, may confidently be expected.

CITRUS FRUITS.

The cultivation of the orange and the lemon has become one of the principal industries of the districts surrounding the metropolis. The first orange groves were planted near the town of Parramatta, and soon spread to the neighbouring districts of Ryde, Pennant Hills, Lane Cove, the whole of Central Cumberland, the valleys of the Hawkesbury and Nepean Rivers, and the slopes of the Kurrajong Mountains.

Statistics relating to this branch of fruit culture are available only from the year 1879. At that date the area under oranges and lemons was recorded as 4,287 acres; this had increased in 1893 to 11,158 acres, including a productive area of 8,661 acres, with a yield amounting to 10,383,990 dozen oranges, giving an average of about 1,200 dozen per acre. In 1894 the extent of land under citrus fruits amounted to 11,967 acres, and included a productive area of 9,237 acres, with a yield totalling 9,600,290 dozen, or an average of about 1,040 dozen to the acre. The area under orange and lemon trees in 1895 comprised 12,204 acres; the productive area, 9,242 acres; and the total yield, 8,703,252 dozen, or an average of 940 dozen to the acre. In 1896 the area declined to 11,956 acres, of which 8,759 were productive, yielding

5,954,940 dozen oranges, or an average of 680 dozen per acre. It is estimated that over 3,000 dozen of fruit to the acre can be obtained in an average season from fair-sized trees in full bearing, and it is therefore probable that the figures given include the production of a considerable number of young trees.

The number of orangeries cultivated during the year 1895-6 was 1,953, and of these the average area was nearly 6·1 acres. The state of the industry in each year since 1879 is shown in the subjoined statement:—

Year ending 31st March.	Area of Orangeries. Acres.
1879	4,287
1880	5,106
1881	5,939
1882	6,301
1883	6,716
1884	7,268
1885	6,911
1886	7,733
1887	7,920
1888	8,875
1889	10,851
1890	9,804
1891	11,288
1892	11,370
1893	11,158
1894	11,967
1895	12,204
1896	11,956

The production of oranges has already attained such proportions that the growers are obliged to seek markets abroad for the disposal of their produce, as the demand, both in New South Wales and in the adjacent colonies, is in some seasons exceeded by the supply. Efforts have of late been made to open up a market in England, as the fruit can be delivered in London at a time when the supply of oranges from Spain and other countries of the northern hemisphere has ceased. An experimental shipment of New South Wales oranges was made by the Board of Exports in the course of 1896, the result being generally regarded as very satisfactory. The fruit were landed in London in the month of September, when the market was rather bare, the season for Denia and Valencia oranges—which form the chief supply of the metropolis—beginning about the middle of October and lasting till the end of June. The packing was generally good, while the fruit which were well and firmly packed in white paper are declared to have looked very nice when opened, and the agents in whose hands the shipment was placed for disposal recommend the use of tissue paper only for packing, and the avoidance of soft shavings, sand, and pumice dust. Of the 1,740 cases, 15 were taken in the hold of the mail steamer "Ophir," and these opened unsatisfactorily. The remaining 1,725 cases were carried in the cold-storage chambers of the vessel, and the freight was consequently very high, averaging for the whole shipment 3s. 11d. per case. Despite this heavy charge, however, a net profit of £143 10s. 7d. was cleared on the transaction, equal to a return of 14·7 per cent. The fruit cost £487 10s. 6d.; freight amounted to £343 13s. 4d., and other charges to £168 12s. 1d., making a total sum of £999 15s. 11d., which was reduced to £968 4s. 7d. by returns from the sale of culls, etc. The oranges realised £1,195 15s. 6d., from which fell to be deducted £84 0s. 4d.

for commission and charges in London, leaving the proceeds at £1,111 15s. 2d., or, as already stated, £143 10s. 7d. in excess of the total cost.

Generally speaking, however, the export of oranges has not met with very great success, owing to imperfect sweating and bad packing. Experts declare that in curing citrus fruits for export the shrinking is not more than from 15 to 25 per cent., and that to pluck crops in June and July and so treat them not only relieves the tree of a burden of fruit during the period when another yield is preparing, but obviates the glutting of the local market with the ripened product. If the fruit is suffered to hang until December, the strain on the tree is excessive, and its vitality is seriously impaired. It is, moreover, stated that the neglect on the part of growers of citrus fruits in New South Wales to pull and prepare the early product has resulted in the lemons grown in this colony being driven out of the markets of Victoria and New Zealand by cured Sicilian and Mildura varieties. In 1895 the export of oranges was estimated at 4,125,000 dozen; but though the trade is at present so small, its prospects, like those of other industries, are regarded as by no means discouraging. It is hoped also that in time there may be established, in connection with the orangeries of New South Wales, manufactories for the preparation of candied citron, orange, and lemon peels, as well as of oils and essences of citrus fruits. The crystallization of mandarins may likewise be an industry of profitable future prosecution; and with the introduction and acclimatization of the Seville orange there should be no reason why Sydney should not rival Dundee in the production of marmalade. Unfortunately, the proverbial antagonism of the Briton to culture of any fruit, cereal, or fabric-plant unknown to the climatic zone of his native land, has hitherto injuriously operated against the introduction of many vegetable staples which experiment and experience have amply demonstrated would flourish luxuriantly in Australia, to the advantage both of the individual and of the community.

ORCHARDS AND FRUIT GARDENS.

For some years past there has been but little increase in the acreage under orchards and fruit gardens. In 1889–90, the year when orchards and land under cultivation to dessert and other fruits, exclusive of orangeries and vineyards, were first distinguished from gardens devoted to the cultivation of vegetables and general market-garden produce, the total area so tilled amounted to 18,867 acres, and of this area 7,167 acres were situated in the metropolitan county of Cumberland. In the agricultural year ending 31st March, 1896, the area similarly cultivated amounted to 28,780 acres, showing an increase during the six years of 9,913 acres. The area under orchards and fruit gardens in the county of Cumberland, including both productive and unproductive holdings, is now 12,969 acres, or an increase of 5,802 acres on the figures of 1890. Notwithstanding this advance, the fruit-production of New South Wales is still far behind the demands of local consumption. The colony, therefore, is obliged to import large quantities, the greater part of which could be successfully grown within its own boundaries. Leaving out of the question the considerable importations of tropical fruits from Fiji, the South Sea Islands, and Queensland (and some varieties could most certainly be cultivated in the tropical portion of New South Wales), the introduction of fruit from abroad is still greatly in excess of the moderately-estimated possibilities of local production.

The following table shows the area under orchards and fruit-gardens, exclusive of orangeries and vineyards, together with the total value of each year's yield, for the period during which statistics relative to this subject have been collected :—

Year ended 31st March.	Area of Productive Fruit-gardens and Orchards.	Area of Fruit-gardens and Orchards not bearing.	Total area cultivated for Fruit-gardens and Orchards.	Total value of the Production of Fruit-gardens and Orchards.	Approximate average value per acre.
	acres.	acres.	acres.	£	£ s. d.
1890	14,342	4,525	18,867	185,012	12 18 0
1891	16,081	6,274	22,355	213,934	13 6 0
1892	16,606	7,424	24,030	211,790	12 15 0
1893	18,117	8,163	26,280	229,425	12 13 0
1894	19,330	7,663	26,993	197,374	10 4 0
1895	21,465	8,258	29,723	175,473	8 3 0
1896	20,635	8,145	28,780	130,735	6 7 0

From the foregoing table it will be seen that the value of the total production was highest during the agricultural season 1892–3, but the approximate average value per acre was highest for the year 1890–1. The agricultural season 1895–6 showed a decline in the value of the total production of orchards and fruit gardens amounting to £44,738 from that of the previous year, to £66,639 for that of 1894, and to £98,690 from that of the year 1893 ; while the approximate average value per acre of the past season has declined by £1 16s. from that of 1895, and by £6 19s. from that of 1891, the year of the series showing the best returns in this particular. The approximate average annual value for the seven years extending from 1890 to 1896 was £7 12s. per acre. It will be noticed that while there has been an advance in the productive area, that described as not bearing appears to have remained for several years almost stationary ; the total amount of new land put under orchard and fruit crops, other than oranges, lemons, and grapes, during the six years ending 31st March, 1896, was, however, recorded as 10,743 acres, or an average of 1,790 acres per annum. The subjoined statement shows the amount of acreage of the productive area under fruit-gardens and orchards for each of the seven years under notice, the acreage added from year to year from areas previously not bearing, and the new land put each season under this form of cultivation :—

Year ended 31st March.	Productive area of Fruit-gardens and Orchards, from preceding year.	Area added from Fruit-gardens and Orchards previously unproductive.	Total Productive Area.	Area of Fruit-gardens and Orchards not bearing, remaining from previous year.	New land put under cultivation to Fruit-gardens and Orchards.	Total area not bearing.	Total area under cultivation to Fruit-gardens and Orchards.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.
1890	14,342	......	14,342	4,525	......	4,525	18,867
1891	14,342	1,739	16,081	2,786	3,488	6,274	22,355
1892	16,081	525	16,606	5,749	1,675	7,424	24,030
1893	16,606	1,511	18,117	5,913	2,250	8,163	26,280
1894	18,117	1,213	19,330	6,950	713	7,663	26,993
1895	19,330	2,135	21,465	5,528	2,730	8,258	29,723
1896	21,465	*830	20,635	8,258	*113	8,145	28,780
Total	....	6,293	....	....	10,743	....	....

* Gone out of cultivation.

From the figures just given it will be seen that 6,293 acres have been added to the productive area, during the period, out of 10,743 acres of new land put under cultivation.

For the year 1895 the value of the imports of bananas, principally from Queensland, the New Hebrides, and Fiji, amounted to £47,420; of pine-apples, nearly all of which came from Queensland, to £10,645; of other green fruit, mostly from Tasmania, to £100,465 ; of dried and candied fruit—including currants and raisins (£49,160), dates (£9,464), cocoanuts and other edible nuts—to £81,845, of which the United Kingdom supplied £40,809 ; and of bottled fruits and fruit boiled or in pulp, to £3,981 ; or a total for the year of £244,356. From this must be deducted the value of the re-exports of foreign-grown fruits from New South Wales during the same period; and this amounted to £25,203, including green fruits of various kinds to the value of £12,504. The net value of the importations of foreign-grown fruit into New South Wales during 1895 was, therefore, £219,153, or £22,725 higher than in the preceding year, and £2,106 higher than in 1893. The export of locally-grown fruit during 1895 amounted in value to £68,986, which was almost wholly made up of green fruit, the chief customers of the colony being Victoria, Queensland, and New Zealand. The value of the domestic production for the agricultural season 1895–6, including oranges and grapes for table use, may be set down at £257,000; the value of the imports for the year 1895 was £244,356, and of the exports £94,189. The local consumption of fruit for the year was, therefore, valued at £407,000, or £17,000 less than that of 1894.

The colony's contribution of fruit to its own wants, less exports of locally-grown produce, was valued at £188,000—an amount showing a decrease of £40,000 on the figures for 1894.

If to the results just given be added the net imports of canned fruits, jams and jellies, ginger, and other preserves of foreign production, the balance of exchange in fruit commodities will be further modified. The net imports of these commodities may be set down for 1893 at £16,503; for 1894 at £14,410; and for 1895 at £8,630. The imports for local consumption of all fruits and fruit products, fresh, dried, canned, candied, preserved, boiled, in pulp, and bottled, would amount, in 1893, to £233,550; in 1894, to £210,838; and in 1895, to £188,797—a diminishing sum, certainly, but still far too large in view of the colony's natural resources, both of soil and of climate. It must be admitted that New South Wales is far in the rear as a fruit-producing country, and the names of the lands from which she derives so large a portion of the fruits and fruit-products locally consumed are convincing of the fact, seeing the range of climate and varying qualities of soil possessed by the colony, which are in many cases also identical with those of the fruit-importing countries mentioned, that, with some few exceptions, there could be produced all the fruit demanded for local consumption.

Fruitgrowers, however, may look beyond the prospect of supplying the country's requirements in fruit products with those locally grown. The success which has attended the export of fruit from Tasmania has shown orchardists in this colony that they may find it more profitable to grow with a view to exporting to England than to place their product in a glutted market at home; and it needs only a few successes in London to cause a development of the trade. During the past few years the dried fruits prepared at Mildura have made a good impression in England, and demonstrated the possibility of profitable trade, provided all the primary conditions of careful curing and packing are scrupulously and undeviatingly fulfilled. Victoria has recently opened up an experimental exportation of apples to Java and Singapore; and shippers in the neighbouring colony consider that they have discovered an ideal packing material in the shredded bark of the tea-tree, which has been used also with great success as a packing medium for passion-fruit, consignments of the latter having reached London in an excellent state of preservation. There are, indeed, great possibilities in the matter of an export trade in fruit, not from New South Wales alone, but from all the Australasian colonies, when shippers have learnt how to dry and pack their consignments in such a manner as to ensure soundness and preservation of flavour during the voyage. At present, as in the wine-growing interest, the fruit industry has suffered, not so much from lack of foreign appreciation and interest, as from the inexperience of those engaged in the trade.

The subjoined table shows the productive, non-bearing, and total area under cultivation to dessert, table, and preserving fruits, exclusive of grapes, oranges, and lemons, together with the total value of the season's returns, the average value of the yield per acre, and the number of cultivators engaged, arranged according to the geographical divisions into which the colony has been divided for purposes of comparison :—

Division of the Colony.	Productive Area.	Area not yet bearing.	Total area.	Total value of production.	Average value per acre.		
	acres.	acres.	acres.	£	£	s.	d.
The Coast—							
Northern District	566	254	820	4,992	8	16	0
Hunter and Hawkesbury Valleys	2,298	1,421	3,719	14,157	6	3	0
County of Cumberland and Metropolis	9,994	2,975	12,969	71,644	7	3	0
Southern District	1,444	828	2,272	6,975	4	17	0
Total	14,302	5,478	19,780	97,768	6	17	0
The Table-land—							
Northern District	1,269	401	1,670	5,333	4	4	0
Central ,,	2,054	837	2,891	10,304	5	0	0
Southern ,,	2,223	1,108	3,331	8,963	4	1	0
Total	5,546	2,346	7,892	24,600	4	9	0
The Western Slope—							
Northern District	262	67	329	2,630	10	1	0
Central ,,	72	37	109	796	11	1	0
Southern District and Valley of the Murray	405	176	581	3,479	8	12	0
Total	739	280	1,019	6,905	9	7	0
The Western Plains	48	41	89	1,462	30	9	0
Grand Total	20,635	8,145	28,780	130,735	6	7	0

Of the total area under fruit orchards in New South Wales, over two-thirds are situated in the coastal belt, and nearly one-half in the metropolitan county of Cumberland. While, however, the acreage and total value of production diminish progressively with each division of the colony westward from the coastal belt, the average yield per acre is highest in the western plains and on the western slope. The total area under fruit of all kinds in New South Wales was 48,255 acres. Of this extent of land, 28,780 acres were under orchard fruits, 11,956 acres were under citrus fruits, and 7,519 acres were under grape vines.

FLORICULTURE.

Statistics regarding this branch of agriculture have not yet been collected, although there are numerous nurseries, besides private gardens, in the metropolitan county, in which flowers, plants, and ornamental trees and shrubs are cultivated purely in the interests of commerce. The climate of Sydney is warm and humid, and splendid varieties of hydrangeas, orchids, azaleas, pelargoniums, bouvardias, gladioli, chrysanthemums, dahlias, gloxinias, rhododendrons, and many other species of decorative flora, are cultivated with success. The coastal bush lands, and the valleys of the Hawkesbury and its different reaches, are explored for variegated, tree, and stag-horn ferns, and their sale forms an active part of the metropolitan horticulturist's business. Such denizens of the forests and ridges as the tiger-lily, the waratah, the stenocarpus, the flannel-flower, the Star of Bethlehem, the Christmas-bush, the wattle-blossom, and the Christmas-bell are gathered by itinerant flower-vendors and hawked at the corners of streets, besides being procurable in the nurseries and shops of florists. Landscape gardening is an important branch of the industry, and a considerable sum is annually spent in the designing and forming of grounds and gardens and in the erection of hot, glass, frame, and bush houses. Recently flowers have attracted attention as the basis of an industry similar to that carried on in the Channel Islands and in different parts of France and Germany, viz., flower-cultivation for the manufacture of scent, an industry, however, like others mentioned in this chapter, which awaits development in a more or less distant future. Experiments in this direction are now being made at the Hawkesbury Agricultural College.

It is matter for deep regret that the colony's beautiful native flora is being gradually destroyed. It now contributes, in forming the staple of annual displays, to the reduction of the debts on churches and other institutions; and the coast-slopes and the bush-lands in the neighbourhood of every town are periodically denuded to furnish attractions to local flower-shows and charity bazaars, the well-meaning decorators of which, not content with merely plucking the blooms they require for their floral designs, tear them out by the roots, and create a waste where there was formerly a garden.

VEGETABLE OILS AND ESSENCES.

Besides the preparation of eucalyptus oil and essence, dealt with in the chapter on forestry, and the probabilities of the establishment of an industry of flower-culture for the making of scents, referred to in the preceding section of this chapter, there are a number of as yet undeveloped branches of manufacture of vegetable oils and essences, capable of almost indefinite prosecution. Chief of these are the culture of the olive, the castor-oil plant, and linseed. Oil of lemons and essence of lemons have already been touched upon in that part of this chapter which treats of citrus fruits, and, therefore, require no further reference here.

Little has been attempted in New South Wales in the culture of the olive, which not only yields a particularly valuable oil, but the fruit of which, as a pickle, constitutes a highly profitable article of commerce.

In the future, however, its cultivation will be stimulated by a growing local demand. In South Australia, where the olive is rapidly becoming a staple, and where considerable areas have been placed under the trees, 10s. a gallon for the oil has been received by the growers. The soil and climate of New South Wales, in districts where the range of temperature is similar to that of the olive-growing countries which border the Mediterranean, should be no less favourable to the culture of the olive than the soil and climate of South Australia; in fact, they are claimed by some enthusiasts to be even, in certain respects, superior to the latter. In regard to what has been attempted locally by way of encouraging this industry, it may be mentioned that the Agricultural Department of the colony has had planted, at the Murrumbidgee experimental farm, one acre of olive slips, as a nursery whence young trees may be supplied to persons in the colony desirous of essaying the culture of the olive. There is also half an acre at the Pera Bore, and a few small areas around Albury, making altogether about three acres in the colony. Occasionally an application for olive trees is received by the Department of Agriculture, but none are available yet for distribution, and applicants are in the meantime referred to South Australia.

The castor-oil plant (*Ricinus communis*, or *Palma Christi*) grows luxuriantly in the humid coastal districts of the colony; as it does, indeed, in most tropical and sub-tropical countries, and in the regions bordering the Mediterranean, viz., Greece, Italy, and Spain. The annual consumption of castor oil in Australasia is over 620,000 gallons, of which 240,000 gallons represent the requirements of New South Wales. Nearly the whole of the supply is derived from India; and the average wholesale price of the oil in Sydney is about 2s. 9d. per gallon. The initial cost of establishing the industry would be heaviest in the item of machinery for expressing the oil, although the price of labour would also have to be considered carefully, as the Calcutta oil is produced at a minimum outlay in this particular. Oil can be separated from the seeds of the *Palma Christi* also by boiling in water, but though the largest quantity can thus be procured, the resultant product is apt to become rancid, a disability to which the expressed oil is not liable, hence expression of the seeds is now the process most commonly followed in manufacturing the oil.

One of the most valuable of crops is the flax (*Linum usitatissimum*), and it is matter of surprise that more persistent efforts have not been made to acclimatise it in New South Wales. The plant not only yields "lint" of two kinds—namely, the long fibre called "flax" and the short fibre called "tow"—but a valuable seed also, of the greatest use as a fodder for cattle, in the form of oilcake, of which it forms the chief ingredient; for medicinal purposes; and, above all, for the manufacture of the raw and boiled oils of commerce, known as linseed oil, which form the bases of all paint-mediums. The value of this plant can hardly be exaggerated. There is always a good demand for flax fibre, whether it be long line or coarse tow, and a lint crop is always disposable. New

Zealand flax-fibre brings about £14 per ton in the Sydney market; and raw linseed oil, from 2s. to 2s. 2d. per gallon. The plant will grow and return satisfactory results in any district where wheat will or has been grown successfully, and it is an admirable rotation crop. It is most favourably cultivated in dry lands, in districts fairly free from frosts, which retard its progress and stunt its growth. In country where water is scarce fibre may be obtained from the flax-plant suitable for cordage, and lint or tow adapted to the manufacture of carriage cushions, by a process known as "dry-rotting," in which the dews and the sunshine are utilised to disintegrate the stalks. In the following table is given a list of the net imports in 1895 of various commodities which might easily be supplied, with perhaps one or two exceptions, by locally-grown flax and hemp crops:—

Commodity.	Value.
	£
Linseed oil	25,190
Linseed	2,094
Canvas	26,869
Cordage and rope	12,722
Phormium tenax	5,427
Other flax and hemp	11,092
Fibre	1,902
Total......£	85,296

With the increase of population, and the development of the dairy-farming and shipping interests, the demand for linseed and the various products of the flax-plant is bound to grow. During the season 1895–6, 3 acres were under cultivation to this plant at the Hawkesbury Agricultural Farm, the average yield being 6 bushels of linseed to the acre. The industry has made great progress in India, the Argentine Republic, and the United States. The import of linseed into the United Kingdom during 1895 amounted to 1,969,987 quarters, valued at £3,366,113; and of linseed cake, 212,448 tons, valued at £1,166,786. Hemp (*Cannabis sativa*) could also, doubtless, be successfully acclimatised in New South Wales. It is supposed to be a native of India, but it has long since been naturalised and extensively cultivated in Italy, Russia, Poland, and America. With so large a range of habitat the difficulties of its introduction to this colony cannot be laid to the charge either of soil or of climate.

Another article of import which might, perhaps, be locally produced is that of cotton-seed oil, of which in 1895 the colony imported 15,548 gallons, valued at £1,656; but though the quantity looks small, it must be remembered that extensive domestic production would mean an increased application of the product. Moreover, cotton is a plant of so great a value to commerce that its cultivation, essayed already to some extent in Queensland, would not be undertaken for the purpose of supplying a staple for oil manufacture alone. The great difficulty which stands in the way of cotton culture is, however, the very high price of local labour as compared with that of India and some other countries; hence the colony could never hope to compete against the raw material shipped from the seaports of the Indian Peninsula to supply the looms of Manchester. Nevertheless, very small areas are cropped with cotton in the extreme northern districts of the colony; and large areas have the precise climatic and soil conditions under which cotton is grown to advantage in the United States of America. In Queensland, where its cultivation dates from the days of Dr. Lang, ambitious hopes are entertained with regard to its development in the future.

Indigo (*Indigofera tinctoria*) is a plant the future of the cultivation of which in New South Wales is looked forward to with some expectation by those who have studied its possibilities in its new habitat. There is in the colony a wild plant (*Indigofera australis*), from which it was hoped tinctorial juice might be obtained; but experiments have hitherto proved unsuccessful. The true plant which supplies the indigo of commerce occurs wild in the colony of Queensland, and there is no reason why it should not be acclimatised in New South Wales; indeed, experiments are now being conducted with a view of establishing it as a regularly cultivated crop. Indigo yields the drug from which the beautiful dye bearing its name is obtained, by maceration in water.

HOPS

Hops are but little cultivated in New South Wales, although a few very small crops are picked in the neighbourhood of Orange. In Victoria, Tasmania, and New Zealand, however, they are successfully grown, the product being but little inferior to the celebrated Kentish hops of England. In the opinion of experts they could also be successfully grown in New South Wales, which imported during 1895 no less than 1,029,046 lb. of hops, valued at £33,641. The plant will grow in a temperate climate, free from hot winds in the summer; although frosts in winter are beneficial, particularly in nipping the growth of young shoots, and thus forcing the vitality of the plant into the bines and fruit during their proper season. Plantations of hops should be cultivated in the close neighbourhood of townships and villages, in order to secure the labour of women and children in tying up bines, and branching and picking the hops when ripe. The districts specially adapted for the cultivation of the hop-plant are Armidale, Orange, Goulburn, and Cooma.

FAILURE OF CROPS.

During the agricultural year ended March, 1896, the want of rain was severely felt, and there were no fewer than 14,690 cases of total or partial failure of crops, affecting an area of 248,296 acres. Of these, 12,779 were due to drought, more particularly affecting the wheat crops on the southern table-land. The total area affected by drought was 228,154 acres, of which the area sown with wheat for grain comprised 107,964 acres, and for hay, 53,679 acres. The next largest area affected by any single cause was 8,898 acres by floods, 7,916 acres of which were under maize crops. Excessive rains, occurring chiefly at sowing time, occasioned 46 failures, over an area comprising 696 acres. There were 199 cases of failure, over an area of 1,697 acres, of which the causes were not specified, but they affected chiefly the wheat-crops in the southern districts, while in the northern coast districts a disease was prevalent in the sugar-cane. The ravages of rabbits and hares were the cause of 80 cases of failure of crops, covering an area of 1,458 acres, nearly all of which were situated in the wheat-lands of the colony. The number of cases of rust reported for the last season is not large, 29 instances of loss, affecting an area of 690 acres, being recorded. Hailstorms ruined crops in 130 cases, over 1,895 acres, principally on the southern highlands. Blight attacked certain crops, chiefly maize and wheat, in 81 instances, and affected the production of 620 acres. Bush-fires were singularly few in number, only 14 cases of crops destroyed by their means having been recorded for the year, while the area affected was but 264 acres. In 27 cases the failure of crops, cultivated over 118 acres, was caused by vermin. Frosts, principally in the sugar-growing districts, occasioned no fewer than 472 failures of crops, covering 3,563 acres; and locust swarms were accountable for losses of crops in 8 cases, the acreage affected being 243. For the last two seasons only has the acreage of the crops which have resulted in failure been obtained, and the figures are given below, together with the number of instances of failure from each cause:—

Causes of Failure.	Number of Failures.		Acreage affected.	
	1894-5.	1895-6.	1894-5.	1895-6.
Drought	1,210	12,779	31,342	228,154
Flood	1,703	825	23,250	8,898
Excessive rains	609	46	19,843	696
Rabbits and hares	202	80	6,179	1,458
Rust	30	29	2,559	690
Hailstorms	165	130	1,769	1,895
Blight	132	81	1,475	620
Bush-fires	10	14	451	264
Vermin	43	27	294	118
Frosts	66	472	252	3,563
Locusts	4	8	17	243
Causes not specified	569	199	8,774	1,697
Total	4,743	14,690	96,205	248,296

A reference to the figures just given shows that rabbits and hares during the last two years more than equal, in the area ascribed to their devastations, the ravages occasioned by rust, hailstorms, and bush-fires put together; and it must be remembered that the figures given do not represent all the injury to crops wrought by these vermin, for a considerable percentage of the losses in the colony's wheat-lands from causes unspecified, particularly in the southern districts, may justly be laid to their charge.

Below will be found a statement showing the area under each crop destroyed during the last two years :—

Description of Crop.	1894-5.	1895-6.	Description of Crop.	1894-5.	1895-6.
	acres.	acres.		acres.	acres.
Grain Crops—			Sugar and Tobacco Crops—		
Wheat	53,732	111,754			
Maize	22,724	28,100	Sugar	2,586	3,400
Oats	1,229	4,065	Tobacco	92	141
Rape	197	117			
Barley	330	1,805	Total	2,678	3,541
Millet	75	130			
Rye	13	123	Fruit Crops—		
			Grapes	439	532
Total	78,300	146,094	Oranges	79	552
			Other fruits	654	3,615
Hay Crops—			Total	1,172	4,699
Wheaten	6,145	54,586			
Oaten	4,978	32,427	Kitchen Garden Produce, etc.—		
Lucerne	1,444	2,602			
Barley	87	546	Pumpkins and melons	370	487
Total	12,654	90,161	Produce of market-gardens	145	1,103
			Peas and beans	9	136
Root Crops—					
Potatoes	830	1,921	Total	524	1,726
Onions	25	78			
Turnips	7	29			
Mangold-wurzel	3	10	All other Crops	12	37
Total	865	2,038	Grand Total	96,205	248,296

SERICULTURE.

Much attention has of late been given to the possibilities of silk culture, and experiments in this direction have been attended with a fair measure of success. When the notice of the public was first directed to the industry, mistakes were made in obtaining eggs prior to making provision for the subsistence of the worms, and consequent failures dashed the hopes of the inexperienced enthusiasts who so unpreparedly essayed the culture of silk. In the neighbouring colony of Victoria efforts are also being made to encourage farmers to add sericulture to their minor industries, and expectations are entertained of future large shipments of cocoons, as, for some years to come, little prospect of manufacturing silk locally can be entertained, the colony lacking the experience of skilled labour, and the complex appliances of modern machinery.

The first practical step towards acclimatising the production of silk is the placing under cultivation to the white mulberry (*Morus alba*), sufficient land to grow the only food for the worms which makes systematic sericulture possible. The caterpillars, called "silkworms," will live on the leaves of various kinds of trees, but it is only when they are nourished on the leaf of the white mulberry tree that they will form cocoons of a marketable value, capable of furnishing silk suitable for the looms of the manufacturer.

The varieties of white mulberry best adapted to the demands of the cultivator anxious for immediate results are *Morus alba vulgaris*, sub-variety *Macrophylla* (*Morettiana*), and the *Morus alba latifolia* (*Multicaulis*), the young trees of which supply an abundant crop of leaves of good quality, useful during the early life of the silk-worm, though not the best for the completion of the process of silk-culture. They also form excellent stocks for budding with the varieties having more substantial leaves, such as the *Morus alba vulgaris*, sub-variety *Rosea*, and the *Morus alba Italica.* If farmers would, in addition to their other crops, cultivate about 2 acres of white mulberry-trees, they could, in the third year of growth from seed, begin experimenting in earnest upon the rearing of worms. With a unit of force, comprising a half-grown family of about eighty individuals, the appropriate unit of cultivation would represent a plantation of about 2 acres of white-mulberries, bearing some 5,000 trees. After removal and thinning out, the farmer should have, in their third year of growth, 2,500 trees, which, if they have thriven, should yield from a pound to two pounds of leaves each, or, altogether, from a ton to two tons. The cultivator is then in possession of enough raw material, in the form of mulberry-leaves, to produce from 1 cwt. to 2 cwt. of cocoons, which, if of good quality, would be worth £4 or more per cwt. Arrangements for housing silk-worms need not be very elaborate. Walls of wattle-and-dab, smoothed and white-washed inside, with a roof of thatch, constitute an ideal silk-worm house. Should the producer desire to limit the area under mulberries to 2 acres, he will find that his annual yield will be a fairly steady crop of from 5 to 7 cwt. of cocoons. The produce of silk-worms fed from 2 acres of trees will not materially increase in amount, because with increased age the white mulberry takes up more and more room, and consequently requires successive thinnings-out, until in the course of years there will remain only some 200 or 300 trees to the acre. According to authorities, the yield of leaf per acre in France and Italy, from well-grown trees on fair land, is estimated at from 7,000 to 8,000 lb. The first step in sericulture, viz., the formation of white mulberry-tree plantations, is one the results of which have to be waited for; and this is the reason why so promising an industry has not obtained a better foothold in the colony. Of course, people have endeavoured, and continue in their endeavours, to rear silk-worms without first growing proper food for them; but every such attempt at silk-production has failed, and is, in fact, foredoomed to failure

Recently the attention of the public has been more strongly directed to the possibilities of sericulture by the labours of the Agricultural Department, some thousands of trees and cuttings having been planted during 1894. Little can be done, however, until these trees mature, as there is scarcely a single locality in the colony, at the present time, where there can be found leaf-bearing trees sufficient in number to carry worms in payable quantities. At Booral, in the Newcastle district, the Government has rented a white mulberry plantation, extending over seven acres, with a view of testing the practicability of developing a profitable sericultural industry. On the expiration of the lease at Booral it is intended to continue the experiment at the farm attached to the Hawkesbury Agricultural College, in which locality a large number of white mulberry-trees have been planted for future use. During the year 1894, Parliament voted a special grant of £200 in aid of the Women's Co-operative Silk-growing and Industrial Association; but it is in the extension of the plantations of white mulberry trees that we must look for the real growth of the sericultural industry, which is as yet in only its initial stages. A convincing effort in this direction has been made by the settlers of New Italy, near the Richmond River. These people comprise a number of Italian families, who came out with the Marquis de Ray to settle on the island of New Ireland, and who, on the failure of their leader's scheme of colonization, arrived in the colony of New South Wales in the year 1881. These immigrants have planted successfully a considerable area with white mulberry trees, and have initiated the industry of silk-production in the region of the northern rivers with fair prospects of its future profitable development. The silk is spun by the caterpillars of the genus *Phalæna*; of which the *Phalæna atlas* produces the greatest quantity, but the *Phalæna bombyx* is that commonly employed for this purpose in Europe. The best modern silkworms are obtained from Japan and Italy.

POULTRY FARMING.

Besides the casual barn-door fowls that run in the stack-yards of most farms, the produce of which is devoted chiefly to family consumption, many agriculturists make a special business of rearing and breeding fowls, both for egg-production and for the table; others, again, are poultry-farmers pure and simple, who give all their time and energies to the industry; while yet a third class, to be found only in the immediate neighbourhood of the big towns, and most of them in the metropolitan county of Cumberland, make of the breeding of selected and pure-strain types of birds a study, which meets with its reward in the prize show-pens of agricultural shows.

It is now several years since an exact estimate was made of the number of poultry in the colony. Adjusting the figures to the present year, the number of the principal kinds would be approximately as follows:—

Fowls	3,180,000
Ducks	320,000
Turkeys	234,000
Geese	97,000

The number of persons keeping poultry is 121,000, but, as may be surmised from the figures just given, the great majority of poultry-keepers own but few birds.

The annual production of eggs reaches about 90,000,000, but this quantity is not quite sufficient for local consumption, as there is an import which, in 1895, amounted to nearly 7,500,000 in excess of the export. The annual consumption of poultry may be approximately set down at 2,000,000 fowls, 275,000 ducks, 200,000 turkeys, and 75,000 geese.

ENSILAGE.

Although the value of ensilage as fodder for cattle is generally acknowledged, this valuable method of preserving green foods is not so extensively practised as it should be in a country liable to long periods of dry weather, as is New South Wales. The industry has attained so slight development that an extended notice is not called for; it may suffice to say that the use of silos is confined chiefly to the South Coast district and the table-land, and has not yet extended to the western slope of the mountains, or to the western plains, where it would seem to be most loudly called for. During the agricultural year ending 31st March, 1896, the total production of ensilage was 3,680 tons from 42 silos, being a decrease in the product of 2,531 tons, and in the number of silos of 45, from the figures of the previous year.

HONEY FARMING.

The industry of honey production has acquired sufficient importance in New South Wales to deserve notice in these pages. Hives are not only kept on many of the farms devoted to general agriculture, but there are also in the colony a certain number of establishments of which the sole business is the production of honey and beeswax. Most of the latter are to be found in the Blue Mountains, near the main Western Line of Railway, in the neighbourhood of other main trunk lines, and in the districts surrounding the metropolis. The number of hives in the colony, and their production of honey and wax for the past six years, are shown in the subjoined table. Of the hives given for 1894, 1895, and 1896, there were 8,790, 13,355, and 10,350 respectively returned as unproductive:—

Year ended 31st March.	Hives.	Production.		Total Value.
		Honey.	Wax.	
	No.	lb.	lb.	£
1891	35,749	765,332	23,610	10,780
1892	39,728	894,583	33,786	12,850
1893	48,204	1,395,350	48,178	19,400
1894	53,483	1,139,557	39,242	16,100
1895	49,040	1,135,128	29,326	15,500
1896	37,742	1,123,209	27,520	14,200

The average yield for the season ending March, 1896, from 27,392 productive hives, was 41 lb. of honey per hive; and the total yield showed a decrease of 11,919 lb. of honey, and 1,806 lb. of wax from the production of the preceding year. During 1895 New South Wales imported 52,568 lb. of honey, valued at £629, but the import consisted almost wholly of supplies for the Barrier district from South Australia. The quantity exported by New South Wales in the course of the year amounted to 12,504 lb., valued at £157, of which 8,437 lb., valued at £94, went to the United Kingdom. The total quantity of honey exported from the Australasian colonies during the past five years is shown below. In 1895 South Australia exported 84,178 lb. to the United Kingdom, 23,520 lb. to Norway and Sweden, 93,562 lb. to Western Australia, and 29,540 lb. to New South Wales; while Victoria, in which colony the export was stimulated by a bonus of 1d. per lb., sent 180,055 lb. to the United Kingdom. The total exports to the United Kingdom of the five colonies shown in the table below was 344,694 lb., valued at £4,040.

Colony.	1891.	1892.	1893.	1894.	1895.
	lb.	lb.	lb.	lb.	lb.
New South Wales.....	2,451	7,543	6,620	13,241	12,504
Victoria	52,070	31,154	17,426	14,571	204,435
Queensland	15,608	64,754	18,636	18,214	22,546
South Australia	32,948	30,582	33,097	86,112	246,533
New Zealand.....	197,261	74,070	32,712	43,888	52,976

The adulteration of honey is probably one of the greatest troubles at present confronting the bee-keeper. It is asserted by those having a knowledge of the business that fine amber-coloured honey does not meet with such a ready sale with agents as the darker varieties, because the latter admit of a very much greater quantity of glucose being used in their adulteration.

Several small shipments of New South Wales honey made to England turned out unsatisfactorily, and the Australian product generally has acquired a bad reputation. It is only right to say that this has been accounted for in two ways, one of which is the cry maintained by the English producer for the purpose of excluding colonial imports from competition with local products, a similar attempt having been made with regard to Australian meat, butter, and other articles. The other, and by far the more serious one, however, is that the honey exported to England has frequently been of the worst quality, and locally unsaleable. Good quality has found a ready sale, but it is disposed of as American, Continental, or English, while the inferior article has been identified with Australia. While the Government of Victoria granted a bonus of 1d. per lb. on honey exported to ports outside of Australasia, they stipulated that the product should arrive at the port of destination in a good and marketable condition, and this must have had the effect of enhancing the reputation of the Australian article, if Victorian honey is sold as such.

AGRICULTURAL IMPLEMENTS.

The estimated value of implements used on the various farms is £1,573,300—that is to say, 23s. 4d. for every acre cultivated, excluding fallow lands and lands laid down in permanent grasses. This estimate does not include the value of carts, of machinery for dressing grain, or of anything not actually used in the various processes of tillage and harvesting. The value of plant of all kinds used on farms is approximately £2,280,000.

IRRIGATION.

Little has been achieved in New South Wales with regard to irrigating the immense dry areas of the interior; and, although isolated efforts in this direction have usually met with success, no general scheme of water conservation and distribution has yet been developed. The undertaking is, moreover, so great, the area to be benefited so vast, and the interests to be served are so conflicting, that little can be looked for from private enterprise; and the construction of irrigation works on a large scale must be regarded as equally a matter of national concern with the construction of railways.

The Water Conservation Branch, attached to the Department of Mines and Agriculture, has been for some years engaged in the work of compiling hydrographical data, to form the basis of a comprehensive scheme of irrigation. The country has been traversed in all directions in order to ascertain the variations of its surface contour, and with a view to the selection of the most suitable sites for the construction of weirs across the river channels, in order to retain some of the water passing off in rainy seasons in the numerous billabongs and tributary creeks which under present conditions are dry in summer. It is confidently hoped that large areas now practically waterless will be reclaimed to cultivation, or so improved as to make droughts no longer a terror to the pastoralist.

During the period extending from the year 1888 to that of 1891, the whole of the Riverina country was surveyed, and during the year last mentioned and the succeeding twelve months the Department extended its operations to embrace the river Darling from Wilcannia to Wentworth. The basin of the river Gwydir, the region lying between the rivers Macquarie and Bogan, and that portion of central New South Wales through which, intermittently, flows the Willandra Billabong, were subsequently examined, and the hydrographical survey of the country lying between the Darling and Paroo Rivers, from the town of Bourke to the Queensland border, has since been completed. These surveys extend over a vast area of country, the lineal measurements over which levels have been taken covering some 17,180 miles, and have cost £36,200, a sum which represents an expenditure of only about one-fifth of a penny per acre to be benefited by future irrigatory operations.

The succession of fairly rainy seasons since the year 1887 has contributed in great measure to delay the progress of legislation having reference to this important subject, although various Bills relating to the conservation of water have been prepared during the interval. Practical progress has, however, been made in the direction of giving legislative sanction to the establishment of various public and private irrigatory projects. Special Acts are at present in force dealing with water conservation in the areas surrounding the western towns of Hay and Balranald, where the control has been placed in the local municipal councils, which have been constituted irrigation boards of trustees for the purpose of locally administering the provisions of the measure. The area coming within the operations of the trust at Hay comprises 19,847 acres. The latest figures show that 62 holdings of 5 to 40 acres each, covering a total area of 778 acres, have been applied for. At Balranald an area of 1,000 acres has been surveyed into lots of 5 to 40 acres in extent. There was also a similar trust at Wentworth, having jurisdiction over 10,600 acres, but this has now been dissolved, and its powers assumed by the State. The Government of the colony has secured the services of an eminent Indian irrigation expert for the purpose of devising a comprehensive scheme for the irrigation of the waterless wastes of the country.

In connection with the subject under review, it may be mentioned that the Water Conservation Department also administers the Drainage Improvement Act of 1865, under which seven drainage unions are working. These are organised for the drainage of swamp-lands on the Macleay, the Shoalhaven, and other coastal rivers; and the question of drainage—as important in the case of the rivers Clarence and Richmond, and other great littoral arteries, as locking and weir-construction are in that of the great water-channels draining the western plains—must constitute a feature of no subsidiary character in any Act professing to deal comprehensively with the matter.

Notwithstanding the little that has been done by the State in the matter of irrigation, the settlers have not been altogether inactive, as nearly 40,000 acres have been irrigated by private enterprise. Of this area, the larger portion is situated in the Riverina district. It may be confidently asserted with regard to this district, that wherever it is practicable to preserve water, or to establish an intelligent system of irrigation, the soil will repay with a bountiful harvest the labours of the husbandman. Over what area systematic irrigation may be applied is not yet ascertained, though possibly it may not prove to be considerable on account of the small volume of the rivers whence the water-supply must be obtained, and the irregularity of their flow. The physical formation of New South Wales has been described elsewhere. It differs much, as will probably have been remarked by the reader, from that of any other country where artificial irrigation has been practised on a large scale. Moreover, the absence of mountain altitudes capped with perpetual snow, and forming natural and inexhaustible reservoirs for the water supply of the plains below, is a marked peculiarity, not alone of the colony of New South Wales, but of the whole Australian continent.

CULTIVATION AT TRIAL STATIONS.

At some of the bores and tanks owned by the State, experimental cultivation by means of irrigation with artesian and catchment water has been most successfully conducted; and lucerne, maize, wheat, tobacco, sugar-cane, date-palms, bananas, and many other tropical and sub-tropical products have been grown satisfactorily. At the Pera Bore an area of 640 acres has been subdivided into 20-acre blocks, and offered on lease as irrigation farms; and the experiments in the plantation of fruit and forest trees, date-palms, sugar-cane, cereals, grasses, potatoes, etc., have been so successful that eleven of the blocks have been taken up, and good results are being obtained. At the Moongulla Bore a similar scheme is also being carried out; and it is intended, if these experiments turn out well, to extend operations to other bores. There are plantation trial stations now in existence at the Native Dog, Barringun, and Belalie Bores, on the road from Bourke to Barringun; at the Enngonia Bore, the Coolabah Tank, and the Byerock Tank; at the Waddell Tank, on the road from Bourke to Byerock; at the Moongulla Bore and the Dungle Ridge Bore, on the road from Collarendabri to Angledool; and at the Pera Bore, on the road from Bourke to Wanaaring.

AGRICULTURAL COLLEGE AND EXPERIMENTAL FARMS.

The importance attached by the State to the diffusion of agricultural knowledge is evidenced by the formation of a special Department of Agriculture. The question of providing technical agricultural education, and establishing a college and model farms in [illegible] of the colony, immediately engaged attention, [illegible] establishment was selected at Ham Common, near the town of Richmond, in the Hawkesbury District, where an area of about 4,000 acres was resumed for the purpose. The buildings and furnishings of the College and Farm, now in their fifth year of existence, were completed in January, 1896, and officially opened on the 14th April of the same year. Accommodation is provided for ninety-six resident students, and during 1895 there was a full roll. Theoretical as well as practical instruction is imparted by experts in every branch of agriculture; and experimental work is carried on with cereal and other crops; fertilisers are tested, analyses of soils are made, and the arts of dishorning and speying cattle, with other veterinary surgical practices, are taught. The live stock attached to the Farm and College during 1895 comprised 32 horses, 12 bullocks, 281 head of dairy cattle, 136 pigs, and 50 sheep. The principal operations during the same period are shown in the subjoined statement:—

Acres.	Crop.	Yield per Acre.	Acres.	Crop.	Yield per Acre.
77	Wheat, for grain..	22 bush.	4	Chevalier barley...	6 bush.
6	,, hay ...	25 cwt.	17	Turnips	6 tons
66	Oats	25 ,,	3	Linseed...............	6 bush.
16	Lucerne	2 tons	3	Buckwheat	7 ,,
19	Sorghum	12 ,,	38	Pumpkins	30 cwt.
70	Maize	15 bush.	8	Watermelons	100 doz.
50	Maize stalks for silage, etc.	10 tons	9	Preserving melons	15 tons
			4	Potatoes	3 ,,
30	Barley	15 bush.	2	Mangold wurzel ..	6 ,,

An orchard, 30 acres in extent, and a vineyard, 10 acres in extent, have been planted in connection with the Agricultural College; and the cultivation of plants for the expression of scent has also been begun. In connection with the dairying industry prosecuted at the Farm, it may be mentioned that the milk-yield for 1895 was 132,069 gallons, the quantities of butter and cheese made being 3,264 lb. and 11,005 lb. respectively. Besides the practice of general dairy-farming work, instruction is imparted in cheese-making, also in the management and breeding of poultry, in the rearing of bees and the preparation of honey for the market, in the killing and dressing of sheep, in the carpenter's and the blacksmith's arts, in the construction of fences, and in various mechanical trades.

Besides the experimental farm attached to the Hawkesbury Agricultural College and the plantation trial stations at Pera and other artesian depôts already referred to, the Department has under its direction experimental farms at Bomen and Wollongbar, in the Murrumbidgee River and Richmond River Districts. The Murrumbidgee, or Bomen, Experimental Farm has recently been established near the southern town of Wagga Wagga, and notwithstanding its youth, operations have been pushed well forward. The total area is 2,300 acres, of which 700 acres are in cultivation, 500 acres being devoted to growing seed wheats, barley, and oats; 84 acres to fruit trees and grape vines; and 80 acres to summer crops, such as maize, sorghum, millet, pumpkins, melons, cow peas, lima beans, etc.; the remaining portion being taken up by irrigation plots, nursery, and experimental plots. The numbers of varieties under experiment are as follow:—Fruit, 2,000; wheat, 320; crossbred wheats, 300; oats, 50; barley, 12; sorghum, 20; maize, 20; peas, 36; onions, 24; millet, 12; turnips, 30; sugar beets, 20; potatoes, 60; pumpkins, 50; melons, 30; and fodder crops of every description. Quarters for sixteen students have been erected, as well as cottages for the manager and workmen; also barns, hay-shed, and stables. There is no natural water supply, but dams of 6,000, 10,000, and 40,000 yards capacity have been excavated, and are used for supplying water to the irrigation plots. Upwards of 3,000 farmers visited this farm during 1895. A specialty is made of growing seed wheats and fruits for drying. During the past season applications were received for upwards of 40,000 bushels of seed wheats, the price quoted being 7s. 6d. per bushel, amounting to about £15,000. Preparations are being made for dairying and pig-raising on a large scale, and also for carrying out feeding trials with cattle, sheep, etc.

At the experimental farm at Wollongbar, on the road leading from Lismore to Ballina, a series of experiments are conducted for the purpose of determining the most suitable fodder-plants for culture in this region; and many varieties of sugar-cane, some of which have been procured from Jamaica, as well as of different semi-tropical and tropical plants and fruits, have been planted in order to test their value, and their suitability to soil and climate.

LAW AND CRIME.

POLICE.

AT the end of the year 1895 the police force of New South Wales consisted of 1,853 men of all ranks, of whom 691 were mounted. The force, which comprises 11 superintendents, 11 inspectors, 32 sub-inspectors, 57 senior-sergeants, 110 sergeants, 269 senior-constables, 1,347 constables, and 16 detectives, is commanded by an Inspector-General, who is under the control of the Chief Secretary of the colony, the police being directly in the service of the State. The system of municipal government which exists in New South Wales is a very imperfect one, and the question of handing over to the incorporated areas the power to raise local bodies of constabulary and to appoint their own honorary magistrates has not been seriously considered; nor even if such powers did exist is it at all likely that any municipality would, were the matter left optional, care to burden itself with the preservation of order while the Government continued to perform this duty in the unincorporated districts.

Below will be found the number of police in the metropolitan and country districts at the close of each of the last ten years. It will be seen that with the growth of population the force is steadily increasing in strength, although it is scarcely keeping pace with the advance made in the numbers of the people:—

Year.	Metropolitan.	Country.	Total.	Number of Inhabitants to each Police Officer.
1886	476	986	1,462	676
1887	502	989	1,491	684
1888	518	995	1,513	694
1889	543	1,024	1,567	690
1890	594	1,057	1,651	679
1891	643	1,022	1,665	699
1892	697	1,059	1,756	682
1893	714	1,062	1,776	689
1894	731	1,088	1,819	688
1895	745	1,108	1,853	690

The protection of life and property is not the only duty which the police are called upon to perform. On the contrary, a large portion of their time is taken up in the collection of the agricultural and stock schedules and the returns of works and manufactories, and other work of a like character; in many cases they also act as Clerks of Petty

Sessions and Wardens' clerks, and fill other offices having no direct connection with police duties. The test which is sometimes applied in order to ascertain the law-abiding character of the populations of the various colonies, namely, to compare the numbers of persons protected by each officer, is quite worthless unless the diverse nature of the duties performed by the police and the vast difference in the areas of the provinces are also taken into consideration. The comparison afforded by the following table may, therefore, only be accepted for what it is worth. The figures, like those previously given, refer to the end of the year 1895 :—

Colony.	Police.			To each Police Officer.	
	Metropolitan.	Country.	Total.	Inhabitants.	Square miles.
New South Wales	745	1,108	1,853	690	168
Victoria	695	719	1,414	836	62
Queensland	185	618	803	574	832
South Australia	217	164	381	938	2,372
Western Australia	46	298	344	284	2,837
Tasmania	43	218	261	616	100
New Zealand	43	443	486	1,438	215

A comparison of the police forces of the principal cities of Australasia, the United Kingdom, and the United States, is given in the next table, and it would appear that the Australasian capitals have proportionately less police supervision than many of the other places enumerated in the list. This, however, of itself argues nothing in favour of the law-abiding character of the population of the Australasian cities, but rather that a large number of police could with advantage be added to the force now employed for their protection :—

Cities.	Strength of Police.	Population to each Police Constable.	Cities.	Strength of Police.	Population to each Police Constable.
Australasia—	No.	No.	United Kingdom—	No.	No.
Sydney	745	548	Manchester	1,031	490
Melbourne	695	644	Edinburgh	507	545
Brisbane	185	514	Glasgow	1,310	531
Adelaide	217	665	Dublin	1,145	308
Perth	46	425	United States—		
Hobart	43	853	New York	3,421	443
Wellington	43	915	Philadelphia	1,717	621
Auckland	47	915	Chicago	1,625	677
United Kingdom—			Brooklyn	1,157	698
London	14,260	395	Boston	916	490
Liverpool	1,294	400	Baltimore	782	556

The total cost of the police service in New South Wales for the year 1895–6 was £333,110. This sum, however, includes not only the pay of the officers and men, but also the expenses of equipment, forage, and mounting, as well as of the office establishment. The pay of a constable ranges from 6s. to 8s. per diem, while sergeants receive from 9s. 3d. to 10s. 6d. per day. Detectives receive from 9s. to 12s. per day.

A comparison of the cost of the police forces of the various colonies will be found below. The greater proportion of mounted troopers in those colonies where very large and thinly-populated districts have to be scoured tends to make the average cost somewhat higher than in the other provinces :—

Colony.	Police Force.	Total Cost of Force.	Average Cost per Constable.			Average Cost per head of Population.		
	No.	£	£	s.	d.	£	s.	d.
New South Wales	1,853	333,110	179	15	4¼	0	5	2½
Victoria	1,414	244,383	172	16	7½	0	4	1½
Queensland	803	168,610	209	19	6	0	7	3¾
South Australia	381	75,635	198	10	4	0	4	3¼
Western Australia	344	70,466	204	16	10¼	0	13	11
Tasmania	261	34,737	133	1	10	0	4	4½
New Zealand	486	98,272	202	4	1½	0	2	10
Australasia	5,542	1,025,213	184	19	9½	0	4	10¼

COMPILATION OF CRIMINAL STATISTICS.

No one who has given his attention to the subject of the prevalence of crime in Australasia can have failed to be struck by the fact that, in comparison with the other colonies, New South Wales has always shown a remarkably high rate of offenders—a rate which, it is true, has, as in the case of the other colonies, fallen with the social progress of the people, but which has, nevertheless, year after year, pertinaciously maintained its unenviable pre-eminence amongst the provinces, with the exception of Western Australia, which is in quite an exceptional position. In one quarter the theory was put forward that this state of affairs must be due to a blood taint derived from the bond population of early days ; but unfortunately for this conjecture, the statistics show that at the time it was hazarded only 36·2 per cent. of the offenders were natives of the colony, while even at present the proportion barely reaches one-third. Undoubtedly the position occupied by New South Wales is not one into which the colony has been forced and held there by one cause alone. The absence of an Act to prevent the influx of criminals from other provinces; the large floating population of the colony; the differences in the criminal code; the greater strictness of police administration—all these are matters which must be recognised as having exerted and as exerting an appreciable influence on the prevalence of crime in New South Wales. But careful investigation during the last few years has shown that the returns, both of the police and of the Clerks of Petty Sessions, have painted the colony in much darker hues than the actual number of the criminal population warranted. Formerly great importance was attached to the number of apprehensions shown by the police to have been made during the year; but it has become evident that the figures obtained from the police are somewhat misleading, as they represent the total transactions of the various stations and offices rather than the actual number of persons apprehended. For example, it is the practice to count an arrested person at every office into which he may be brought prior to making an appearance before the Bench, and it is not too much to say that the police returns are overstated to the extent of something like 13 per cent. Under these circumstances, it was thought better to abandon altogether the figures compiled by the police, and to rely upon the returns of the courts alone, since every person who is entered in the charge-books must be brought up in open court; but this course has only been possible within the past two years, for the returns of the Clerks of Petty Sessions themselves have been to a great extent misleading. Indeed, it has been considered advisable, in compiling this chapter for the present edition of the "Wealth and Progress," to discard the statistics of magistrates' courts for all years prior to 1891, for down to 1890 the form of return filled up by the Clerks of Petty Sessions, which was that drawn up for use in the United Kingdom, was such as to lend itself very readily to careless compilation, being of such a kind that the entries made could not be checked in the statistical office. Accordingly, another form of return, which would ensure the accurate entry of the proceedings in magistrates' courts, was prepared and came into use for the first time in 1891. Since that year imperfections in the compilation of the statistics have been remedied one by one as they have manifested themselves. It was found that a large element of confusion was introduced by the presentation of the business of the courts on the different bases of cases, offences, and persons. One case, of course, might cover a number of persons, and one person might be charged with several offences on the one appearance. To make a proper comparison between the population and the persons who are given to lawlessness the number of offenders should be taken, and it is on this basis that the figures have been compiled for 1894 and 1895. For the preceding three years shown in the comparative tables which follow this explanation, only the actual numbers of offences were obtainable, and the figures have therefore been reduced to the basis of offenders by a method which gives as correct an estimate as it is [illegible]

MAGISTRATES' COURTS.

In the Metropolitan district of the colony, the Courts of Petty Sessions are presided over by Stipendiary Magistrates; and in the country districts by Police Magistrates and Justices of the Peace, the latter of whom are honorary officers. All persons entered in the charge-books of the police, except such as have been committed by a Supreme Court Judge or by a Coroner, must be brought up at Petty Sessions, either to be dealt with summarily or to be committed to a higher tribunal. With the exception of breaches of the Distillation Act, the Customs Regulations' Acts, the Chinese Restriction Act, and the Children's Protection Act, which are punishable in the lower courts by a maximum sentence of one year's imprisonment in the case of the first two statutes, and of two years' imprisonment in the case of the other two, the jurisdiction of the magistracy of New South Wales is limited to offences involving a penalty of not more than six months' imprisonment. A magistrate is not empowered to pass cumulative sentences; but while a person is undergoing a term of imprisonment for the committal of one offence he may be brought up in a lower court to answer to another charge, and if convicted may be sentenced to another term, to take effect from the expiry of the first sentence.

Exclusive of those charged as being of unsound mind, the persons brought before magistrates during the year 1895 numbered 60,573, of whom 36,939 had been arrested and 10,718 summoned by the police, while 12,916 appeared on private summons. This gave a proportion of 4,790 per 100,000 of population, as compared with 5,005 in the year 1894, so that during the twelve months the amount of crime, as disclosed by the returns of the lower courts, declined to the extent of 215 per 100,000 inhabitants. Below will be found a table showing in what manner the accused persons were brought up to answer the charges preferred against them, and how their cases were disposed of. It is to be understood that where several offences were charged against a person on the one appearance, account is only taken of the most important:—

How brought up.	Persons charged before Magistrates.	Summarily dealt with.			Committed.
		Convicted.	Discharged, etc.	Total.	
Arrested	36,939	31,652	3,934	35,586	1,353
Summoned by police	10,718	8,514	2,175	10,689	29
,, privately	12,916	6,728	6,116	12,844	72
Total	60,573	46,894	12,225	59,119	1,454

It will be seen from the above table that of the 60,573 persons charged before magistrates during the year, only 1,454 were committed to higher courts, and no less than 59,119 were summarily dealt with—convictions being recorded in 46,894 cases, while 12,225 persons were discharged after evidence had been taken, or against whom proceedings were not pressed. Appended is a division of the accused persons according to sex, from which it may be gathered that while females contributed 7,832 to the ranks of the offenders, only 1·42 per cent. of their number were committed to a higher tribunal, as compared with 2·55 per cent. of the males. Of the females committed, about one-half were charged with larceny, bigamy, and crimes connected with the birth of children :—

Sex.	Charged before Magistrates.	Summarily dealt with.			Committed.
		Convicted.	Discharged, etc.	Total.	
Males	52,741	40,500	10,898	51,398	1,343
Females	7,832	6,394	1,327	7,721	111
Total	60,573	46,894	12,225	59,119	1,454

Comparing the male and female offenders with the population, it will be found that of every 100,000 males in the colony during 1895, 7,767 were charged with offences against the law, while of an equal number of females but 1,337 were accused before magistrates. The summary convictions give the proportions of 5,964 per 100,000 males and 1,092 per 100,000 females. In the case of committals, however, the females emerge from the comparison on much more favourable terms ; for while 198 of every 100,000 males were sent up to higher courts during the year, the proportion of females so dealt with was but 19. The preceding table, reduced to a population basis, will be found below :—

Sex.	Per 100,000 of Population.				
	Charged before Magistrates.	Summarily dealt with.			Committed.
		Convicted.	Discharged, etc.	Total.	
Males	7,767	5,964	1,605	7,569	198
Females	1,337	1,092	226	1,318	19
Persons	4,790	3,708	967	4,675	115

Although the mean population within the metropolitan area in 1895 was 416,050 as compared with 848,610 in the country districts, 31,532 of the 60,573 persons charged before magistrates during the year were brought up in the metropolitan division. On the basis [illegible] this gives a proportion of 7,579 offenders per 100,00[illegible] the metropolis, or considerably more than twice the rate for the country, viz., 3,422 per 100,000. It is, of course, obvious that where the temptation to break the law is greatest, the largest number of offenders will be found; and it is also the case that many offences, such as drunkenness and other offences against good order, are liable to be promptly dealt with in large aggregations of population, while to great extent they escape attention in sparsely-settled districts. If an examination be made into the nature of the offences with which the accused were charged, it will be found that, while the total rate of the metropolitan district was 122 per cent. higher than that of the country, the rate of offences against the person and against property in Sydney and suburbs was but 51 per cent. above the corresponding rate for the other parts of the colony. The difference in the percentage of offenders committed in the two divisions, which may be seen from the following table, is chiefly attributable to the great excess of persons within the metropolitan area charged with breaches of good order:—

District.	Persons charged before Magistrates.	Summarily dealt with.			Committed.
		Convicted.	Discharged, etc.	Total.	
Total Number of Offenders.					
Metropolitan............	31,532	24,915	6,066	30,981	551
Country..................	29,041	21,979	6,159	28,138	903
New South Wales ...	60,573	46,894	12,225	59,119	1,454
Per 100,000 of Population.					
Metropolitan............	7,579	5,988	1,458	7,446	133
Country..................	3,422	2,590	726	3,316	106
New South Wales ...	4,790	3,708	967	4,675	115

Leaving the committals to be dealt with in the superior court returns, an investigation into the nature of the offences of which the 59,119 persons summarily dealt with in 1895 were accused, shows that there were 4,105 persons charged with offences against the person, 799 with offences against property with violence, 4,865 with offences against property without violence, 15 with forgery and offences against the currency, and 49,335 with other offences, the overwhelming majority of which were of a minor character, consisting chiefly of drunkenness and other offences against good order—such as disorderly conduct and using bad language—and of vagrancy and breaches of various Acts. It is evident, therefore, that the somewhat large number of offenders summarily dealt with is made up principally of persons who cannot justly be included amongst the criminal classes, the total number of offenders against the person and against property, including forgery and offences against the currency, being 9,784 out of a total of 59,119. Appended will be found a classification of the offenders summarily dealt with during each of the past five years, with the proportions per 100,000 of population. As already explained, the figures originally published for the years 1891, 1892, and 1893 referred to offences, and they have, therefore, been reduced to the basis of offenders as in the succeeding years:—

Year.	Against the Person.	Against Property, with violence.	Against Property, without violence.	Forgery and Offences against the Currency.	Good Order, and all other Offences.	Total.
Number of Offenders.						
1891	5,515	917	4,622	43	56,433	67,530
1892	6,178	995	5,596	24	56,140	68,933
1893	5,381	1,004	5,127	19	54,926	66,457
1894	4,386	953	5,302	24	49,772	60,437
1895	4,105	799	4,865	15	49,335	59,119
Per 100,000 of Population.						
1891	482·3	80·2	404·2	3·7	4,934·7	5,905·1
1892	522·9	84·2	473·6	2·0	4,751·7	5,834·4
1893	444·5	82·9	423·5	1·6	4,537·5	5,490·0
1894	354·4	77·0	428·5	1·9	4,022·3	4,884·1
1895	324·6	63·2	384·7	1·2	3,901·0	4,674·7

It will be seen from the above table that, in spite of the growth of population, there has been a marked diminution in the actual number of offenders during the last five years, the continuity of the fall being broken only in 1892, when the number of people charged with offences against the person and against property was higher than in 1891. When the returns are compared on the basis of population the decline in the proportion of offenders per 100,000 inhabitants is shown to have been remarkably steady, the rate being 5,905·1 in 1891, 5,834·4 in 1892, 5,490 in 1893, 4,884·1 in 1894, and 4,674·7 in 1895. The figures relating to the individual classes of offences are somewhat disturbed by those checks incidental to all progress, but it will be found that the rates for all classes of crimes have fallen in the course of the five years.

The following table gives a classification of the offences for which summary convictions were obtained during 1895. Of every 100,000 males in the colony, 5,964 were summarily convicted; and of every 100,000 females, 1,092 were similarly dealt with. The offences of which the females were found guilty were naturally less serious than those committed by the males. During the year 1895, there were 5,281 persons convicted summarily of offences of [illegible], and of these only 402 were women. As the table shows, the number of offences against the person and against property with or without violence was 719 per 100,000 males and 69 per 100,000 females.

Offences.	Summary Convictions.			Per 100,000 of Population.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Offences against the person	1,722	141	1,863	254	24	147
Offences against property, with violence	328	52	380	48	9	30
Offences against property, without violence	2,828	209	3,037	417	36	240
Forgery and offences against the currency	1	....	1	....	....	....
Offences against good order	26,866	5,478	32,344	3,956	935	2,558
Offences not included in the preceding	8,755	514	9,269	1,289	88	733
Total	40,500	6,394	46,894	5,964	1,092	3,708

A table affording a comparison between the punishments inflicted on summary conviction in the lower courts during the last ten years would be of great interest, but unfortunately the returns do not permit of its compilation with the necessary degree of accuracy. There is, however, sufficiently reliable information to show that, although the proportion of persons sentenced to peremptory imprisonment was somewhat higher in 1894 and 1895 than in the three preceding years, to a slight extent a tendency has been evinced of late years to punish an offender in other ways than that of consigning him to gaol without the option; while in the case of those persons who were given the option of paying a fine or finding security, or of working their sentence out in gaol, it is also clear that during the last five years, doubtless owing to the scarcity of money, the proportion able to pay the fine has fallen, and the proportion imprisoned in default risen. Below will be found a statement of the punishments inflicted on summary conviction in 1895:—

Offences.	Fines Paid.	Imprisoned in default.	Peremptorily Imprisoned	Bound over.	Other Punishments.	Total.
Offences against the person	1,087	339	309	76	52	1,863
Offences against property, with violence	199	145	29	2	5	380
Offences against property, without violence	738	491	1,667	68	73	3,037
Forgery and offences against the currency	1	......	......	..	....	1
Offences against good order	13,779	15,366	1,693	100	1,406	32,344
Offences not included in preceding	7,421	1,035	355	6	452	9,269
Total	23,225	17,376	4,053	252	1,988	46,894

As shown above, the number of convicted persons sentenced to peremptory imprisonment was 4,053, and adding those incarcerated in default of paying the fine or of finding security, viz., 17,376, the total number imprisoned was 21,429, out of 46,894 summarily convicted by the magistrates, or 45·7 per cent. The number of fines paid was 23,225; but it is probable that some of those who were imprisoned in default of immediately paying the fine imposed were discharged before the term had expired, the amount having been paid in the meanwhile. The total sum received by way of fines during 1895 was £22,011, of which amount £12,443 was paid into the Consolidated Revenue, £6,844 was given to the Police Reward Fund, and £2,724 was paid to the Transit Commissioners, benevolent institutions, municipalities, and informers. The amount of the fines received during each year since 1886 is given below. With the exception of the amount for the year 1895, the sums are exclusive of rewards paid to informers and of fines going to municipalities and other corporate bodies:—

Year.	Amount.	Year.	Amount.
	£		£
1886	27,024	1891	25,955
1887	23,407	1892	24,450
1888	22,623	1893	21,934
1889	20,432	1894	17,915
1890	20,596	1895	22,011

Under the Criminal Law Amendment Act (46 Vic. No. 17), provision has been made for whipping as an additional punishment, chiefly for wanton and unprovoked assault and for indecent exposure. The Bench must consist, in the metropolitan district, of two Stipendiary Magistrates; and in the country districts, of a Stipendiary or Police Magistrate and one or more Justices of the Peace. In no case was whipping added to a sentence of imprisonment passed in a magistrate's court during the year 1895.

The First Offenders' Probation Act of 1894 (57 Vic. No. 23), containing provisions similar to those which have proved of so much value in the treatment of crime in older countries, came into operation on the 1st June. Under this enactment a youthful offender who has been convicted of an offence committed under sudden temptation may be given an opportunity of showing by his future conduct that his aberration was only temporary, and with this object in view the prevention of contamination by gaol associations is provided for. The person whose case is dealt with in this manner by the presiding magistrate or judge is not required to serve the sentence passed upon him, but is liberated on entering into a recognizance, with or without sureties, for his good behaviour during the period over which his sentence extends, the probationary term, however, being not less than one year in every case. Before he is permitted to depart from custody he is examined for future identification, and during the period covered by his sentence he must report himself to the police every three months. If he should fail to do so, or should again lapse into crime, he may be arrested and committed to gaol for that portion of his sentence which is still to run; but should his behaviour be good throughout the whole of the probationary period he is not regarded as having been convicted, and if at any time later on he is arrested for another offence a previous conviction cannot be put in against him. During the year 1895, 77 persons summarily convicted were released under the provisions of the First Offenders' Probation Act, and in the table showing the punishments inflicted these persons have been included under the heading of "Bound Over." In one or two cases an offender so dealt with by the magistrate was unable to find sureties, and in default had to go to prison.

A comparison of the persons convicted in courts of summary jurisdiction during the last five years is afforded by the table given below. For the years 1894 and 1895 the actual figures are given; for the preceding years an estimate has been formed:—

Year.	Offenders against the person.		Offenders against property.		Other Offenders.	
	Number.	Per 100,000 of Population.	Number.	Per 100,000 of Population.	Number.	Per 100,000 of Population.
1891	2,525	220·8	3,055	267·1	45,186	3,952·3
1892	2,838	240·2	3,668	310·4	44,828	3,794·2
1893	2,558	211·3	3,484	287·8	43,972	3,632·5
1894	2,083	168·3	3,474	280·7	40,653	3,285·3
1895	1,863	147·4	3,417	270·3	41,614	3,291·6

Note.—The figures in this table have been amended since last issue.

The foregoing figures show that during the five years there has been a marked diminution in the number of summary convictions by magistrates, as well as in the rate per 100,000 of population—and that, too, in face of the constant passing of new Acts, breaches of which are punishable by fine, and the growing tendency to dispose of cases in the lower courts. Since the appointment of Stipendiary Magistrates in the Metropolitan district there has been a greater proportion of cases summarily dealt with, while it is also noticeable that the proportion of acquittals and discharges has greatly fallen off. Prior to 1880, it may be said that about 25 per cent. of the persons brought before magistrates were discharged, while in no year shown since 1885 was the proportion more than 16·6 per cent. until 1895, when the figures were exceptionally high. The following table shows the proportion of summary convictions by magistrates, of acquittals and discharges, and of committals to higher courts :—

Year.	Summary Convictions.	Acquittals and Discharges.	Committals to Higher Courts.
	per cent.	per cent.	per cent.
1870	69·0	24·7	6·3
1875	70·1	25·3	4·6
1880	76·9	18·4	4·7
1885	82·9	14·1	3·0
1890	80·4	16·0	3·6
1891	81·6	14·8	3·6
1892	80·3	16·6	3·1
1893	80·4	16·0	3·6
1894	82·9	13·1	4·0
1895	77·4	20·2	2·4

APPREHENSIONS.

It has already been explained that the police returns are somewhat overstated, and in order to obtain the actual number of persons apprehended it is necessary to reduce the figures compiled by them. This has therefore been done in the following table, showing the number of persons arrested during each of the last ten years, with the proportion per 100,000 of population. For 1894 and 1895 the number of arrested persons brought before magistrates has been taken, while for the preceding years the figures have been estimated by a process which leaves little doubt of their close approach to absolute accuracy. It will be seen that the rate per 100,000 inhabitants shows a satisfactory decline during the period, and that it is now only about two-thirds of the proportion in 1886 :—

Year.	Arrests.		Year.	Arrests.	
	Number.	Per 100,000 of Population.		Number.	Per 100,000 of Population.
1886	43,333	4,470	1891	40,012	3,499
1887	39,111	3,892	1892	40,445	3,423
1888	37,768	3,646	1893	38,562	3,186
1889	34,012	3,189	1894	36,044	2,913
1890	34,210	3,105	1895	36,939	2,920

NOTE.—Since last issue the figures in this table have been amended.

AGES OF OFFENDERS.

The ages of persons arrested for various classes of offences during the year 1895 are given below. The returns of the police have been proportionately reduced to the basis of the number of arrested persons brought before magistrates in the course of the year. It will be seen that the most serious offences were charged against persons between the ages of 25 and 30, and that it was this age-group which yielded the largest proportion of offenders of all kinds :—

Offences.	Ages.										Total Apprehensions.
	Under 10.	10 and under 15.	15 and under 20.	20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and under 45.	45 and under 50.	50 and upwards.	
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Against the person	3	9	137	313	633	402	248	179	98	161	2,183
Against property, with violence	3	25	60	104	191	122	64	49	27	46	691
Against property, without violence	21	246	579	677	1,227	702	469	303	181	353	4,758
Forgery and offences against the currency	..	1	7	16	18	16	11	9	2	10	90
Against good order, including drunkenness	3	61	1,131	2,857	5,424	4,551	4,021	3,357	2,395	4,199	27,999
Not included in the preceding	29	190	135	159	264	151	93	95	43	59	1,218
Total	59	532	2,049	4,126	7,757	5,944	4,906	3,992	2,746	4,828	36,939

The proportion of offences committed at different ages varies very little from year to year. In the following table this proportion is shown for the year 1895 :—

Ages.	Persons Apprehended.			Per 100,000 of mean population.		
	Males.	Females.	Total.	Males.	Females.	Total.
	No.	No.	No.	No.	No.	No.
Under 10 years	55	4	59	32	2	17
10 years and under 15	486	46	532	704	67	385
15 ,, 20	1,742	307	2,049	2,892	499	1,684
20 ,, 25	3,250	876	4,126	5,046	1,453	3,308
25 ,, 30	6,615	1,142	7,757	9,912	2,156	6,480
30 ,, 35	5,105	839	5,944	8,801	2,029	5,983
35 ,, 40	4,145	761	4,906	9,223	2,473	6,480
40 ,, 45	3,386	606	3,992	9,708	2,427	6,670
45 ,, 50	2,342	404	2,746	7,805	1,925	5,385
50 years and upwards	4,140	688	4,828	5,419	1,345	3,796
Total	31,266	5,673	36,939	4,604	969	2,921

BIRTHPLACES OF OFFENDERS.

At the census of 1891 the persons born in New South Wales formed 65 per cent. of the total population; while of the 36,939 males and females arrested during the year 1895, only 13,682, or 37·0 per cent., were born in the colony. These figures are not, however, to be taken by themselves as proving the law-abiding character of the native-born as compared with the remainder of the community, as the bulk of the people under 20 years of age are by birth Australian, while males largely predominate over females among the British and foreign-born residents within the colony. With the steady increase in the number of those born within the boundaries of New South Wales, there has naturally been a corresponding increase in the proportion contributed by them to the total number of apprehensions, the figures in 1895 being 37·0 per cent. as against 28·1 per cent. in 1886; and, similarly, the proportion of arrests of persons born in other parts of Australasia has risen in this colony from 5·2 per cent. to 11·1 per cent. in the same period; while a decline in the proportion of persons of other than Australian birth resident in New South Wales has been accompanied by a decrease in the proportion of apprehensions contributed by them, the figures falling from 66·7 per cent. to 51·9 per cent. during the past decade.

But little can be gained by a comparison of offences with the number of persons of each nationality, as the bulk of the offences are committed by the adults, who comprise only one half of the native-born as against over 90 per cent. of the residents of certain other nationalities. Taking only the male offenders committed to gaol, and comparing them with the male population, the most law-abiding portion of the community are the much-abused Chinese, who show 778 convictions per 100,000. Next come the Italians with 989 per 100,000; then the South Australians, with 1,286; the English, with 1,613; the Germans, with 1,658; the native-born inhabitants of New South Wales, with 1,804; the Scotch, with 1,875; the Danes, with 2,103; the Irish, with 2,389; the Victorians, with 2,624; the Western Australians, with 2,674; the French, with 3,093; the Tasmanians, with 3,234; the New Zealanders, with 3,412; the Russians, with 4,068; the Swedes and Norwegians, with 4,735; the natives of the United States, with 5,364; and the Queenslanders, with 5,398. Even these figures, though deduced from proper data, require some explanation. The offenders belonging to the United States and to Scandinavia are for the most part sailors, whose offences should not be charged against the general population; some of the French are recidivistes from New Caledonia; and, indeed, it may be said that the offences do not arise from the nationality of the offender, but from his ignorance, his poverty, or his environment. In connection with this subject, it may be remarked that natives of countries which show a [illegible]parative criminality exhibit in the colony a rate [illegible] difficult to understand except on the supposition that a freer life and a larger remuneration have awakened dormant tendencies which otherwise would not have developed.

The native countries of all persons arrested in 1895 will be found in the following table:—

Birthplaces.	Offences.						Total Apprehensions.
	Against the person.	Against property, with violence.	Against property, without violence.	Forgery and offences against the currency.	Against good order.	Not included in the preceding.	
	No.	No.	No.	No.	No.	No.	No.
New South Wales	942	312	2,179	32	9,690	527	13,682
Victoria	154	51	425	5	1,439	43	2,117
Queensland	35	13	89	1	374	17	529
South Australia	30	7	75	5	265	11	393
Other Australasian Colonies	80	22	191	5	745	35	1,078
England	303	108	735	17	5,397	211	6,771
Scotland	108	46	194	4	2,013	77	2,442
Ireland	264	78	435	10	5,810	108	6,705
Other British possessions	38	6	63	1	349	14	471
France	17	4	32	1	147	8	209
Germany	27	5	73	3	349	37	494
China	61	10	62	2	129	22	286
Other Foreign Countries	124	29	205	4	1,292	108	1,762
Total	2,183	691	4,758	90	27,999	1,218	36,939

RELIGION OF OFFENDERS.

The nominal religious profession of each person arrested is ascertained and entered in the charge-sheet. During 1895 the arrests of persons belonging to each of the various denominations were:—

Religions.	Offences.						Total. Apprehensions.
	Against the person.	Against property, with violence.	Against property, without violence.	Forgery and offences against the currency.	Against good order.	Not included in the preceding.	
	No.	No.	No.	No.	No.	No.	No.
Church of England	814	263	2,059	37	10,374	516	14,063
Roman Catholic	944	325	1,948	27	13,065	405	16,714
Presbyterian	158	42	808	10	2,422	111	3,046
Wesleyan	53	15	142	7	464	88	719
Congregational	5	1	19	....	54	8	87
Baptist	11	2	24	....	74	6	117
Lutheran	36	4	55	2	466	52	615
Salvation Army	6	....	7	....	18	2	33
Unitarian	1	....	3	....	5	....	9
Other Christian Denominations	7	....	19	....	73	6	105
Hebrew	20	6	31	2	74	9	142
Mahommedan	6	1	9	....	29	13	58
All others	122	32	139	5	881	52	1,231
Total	2,183	691	4,758	90	27,999	1,218	36,989

It is found that no great reliance can be placed on the statements of many of the persons who are arrested as to the religious belief which they nominally profess, as in some instances offenders are found to have returned themselves as of three or more different religions in the course of a year; but allowing for all such persons the foregoing may be taken as a fair statement of the creeds adopted by offenders. The table shows a large excess of Roman Catholic offenders; this denomination numbers about 25·5 per cent. of the population, while the proportion of persons so returning themselves was 45·2 per cent. of the total offenders—a condition of things which has obtained for many years, and which has in all probability been due to the lower social condition of the members of the Roman Catholic community.

EDUCATION OF OFFENDERS.

The degree of education of those who were arrested has also been obtained as far as possible. Four grades of education were formerly adopted for classification purposes, but in consequence of the difficulty of defining the term "Superior Education" that classification has been abandoned, and as the amount of education possessed by persons who are said to be able to read only must be very slight, the distinction between this class and the completely illiterate has not been attempted. The educational status of persons arrested during 1895 is shown below:—

Offences.	Degree of Education.						Total Apprehensions.
	Illiterate.			Read and Write.			
	Males.	Females	Total.	Males.	Females.	Total.	
	No.	No.	No.	No.	No.	No.	No.
Against the person	176	23	199	1,858	126	1,984	2,183
Against property, with violence	57	13	70	556	65	621	691
Against property, without violence	362	142	504	3,926	328	4,254	4,758
Forgery and offences against the currency	1	3	4	80	6	86	90
Against good order, including drunkenness	1,501	70	1,571	21,651	4,777	26,428	27,999
Not included in the preceding	116	19	135	982	101	1,083	1,218
Total	2,213	270	2,483	29,053	5,403	34,456	36,939

The proportion of persons of 20 years and upwards in the community who are able to read and write is estimated to be about [illegible] per cent., while in 1895 the proportion of persons arrested who [illegible] was 93·3 per cent. From these figures a hasty conclusion might be drawn that the progress of education has not been attended with that decrease in crime which its friends confidently expected to follow in its train. But it must always be remembered that although the proportion of persons arrested who can read and write has much increased of late years, such increase is merely a proof of the spread of education, even amongst those whose environment offers inducements to the commission of crime.

The best proof of the effect of the spread of education on crime is the notable decrease which has for many years been observable in the number of committals and convictions for serious offences. Although the direct effect of the spread of enlightenment cannot be gauged by figures, there is ample evidence to warrant the assumption that education is doing its work as an active leaven for good throughout the community.

DRUNKENNESS.

During 1895 the arrests for drunkenness, with and without disorderly conduct, numbered 20,428, or 55·3 per cent. of the total number of arrests, as compared with 19,522 arrests, and a proportion of 47·6 per cent., for the previous year. There were also 716 persons proceeded against by summons for this offence, as against 623 in 1894. The total number of cases of durnkenness dealt with by the police was, therefore, 21,144, as compared with 20,145 in the previous year. Of the increase, only 290 cases came within the metropolitan area, while 709 were in the country districts. The total number of cases was higher than in 1893, as well as in 1894; but the excess of 1895 was slight, and may be attributable more to greater stringency on the part of the police in the enforcement of the law than to any actual increase of intemperance. That this is a probable view of the case may be assumed from the fact that there has been a slight decrease in the amount of intoxicants consumed, as will be seen from the table on page 392. The following table shows the number of arrests and summons cases for drunkenness in the metropolitan and extra-metropolitan districts :—

Cases of Drunkenness.	Metropolitan District.	Extra-Metropolitan District.	Total.
	No.	No.	No.
Apprehensions	12,438	7,990	20,428
Summons Cases......	261	455	716
Total............	12,699	8,445	21,144

Below will be found a statement showing the number of males and females apprehended and summoned in each police district for drunkenness during the year 1895:—

District.	Apprehended.			Summoned.			Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
Metropolitan ...	9,139	3,299	12,438	201	60	261	9,340	3,359	12,699
Eastern.........	718	77	795	167	10	177	885	87	972
North-eastern ..	1,066	71	1,137	123	3	126	1,189	74	1,263
Northern	800	31	831	33	1	34	833	32	865
North-western ..	1,087	55	1,142	17	....	17	1,104	55	1,159
Bourke	518	18	536	1	1	2	519	19	538
Western	1,033	78	1,111	22	....	22	1,055	78	1,133
South-western ..	1,000	69	1,069	13	....	13	1,013	69	1,082
The Murray	754	28	782	26	1	27	780	29	809
Southern	554	33	587	36	1	37	590	34	624
Total	16,669	3,759	20,428	639	77	716	17,308	3,836	21,144

Persons arrested for drunkenness are chiefly residents of large towns, and it is only natural to expect that with an increase in the population of the towns there should be an increase in the apprehensions for drunkenness. A comparison of the arrests during each year since 1886 is given in the following table, and it is satisfactory to note that the decrease is not only in proportion to the population, but in the actual number. As hinted at on the previous page, however, much stress could not be laid upon the falling off in arrests if there were not other evidence of the decrease of drunkenness, as a word of instruction from the Inspector-General of Police could, according to its tenor, increase or decrease the number of persons apprehended on this charge; but the decline in arrests has been coincident with a marked decrease in the consumption of intoxicants, so that it may be fairly assumed that drunkenness is on the wane:—

Year.	Apprehensions for Drunkenness.			Summons Cases for Drunkenness.	Total Cases of Drunkenness.	Cases of Drunkenness per 100,000 of Population.
	Males.	Females.	Total.			
1886	21,879	4,431	26,310	1,412	27,722	2,860
1887	19,229	3,477	22,706	1,440	24,146	2,403
1888	17,438	3,691	21,129	1,202	22,331	2,156
1889	14,887	3,468	18,355	988	19,343	1,814
1890	15,636	3,018	18,654	969	19,623	1,781
1891	18,477	3,598	22,075	1,096	23,171	2,026
1892	17,296	3,369	20,665	1,144	21,809	1,846
1893	16,180	3,549	19,729	777	20,506	1,694
1894	15,910	3,612	19,522	623	20,145	1,628
1895	16,669	3,759	20,428	716	21,144	1,672

The number of convictions obtained for drunkenness, with and without disorderly conduct, during the year 1895, was 21,025. In

5,560 of these cases, or 26·4 per cent., the offence was committed between 8 a.m. on Saturday and 8 a.m. on Sunday; and in other 1,196 cases, or 5·7 per cent. of the total, the offence was committed between 8 a.m. on Sunday and 8 a.m. on Monday. The number of convictions obtained for breaches of the Licensing Act during the year will be found below. It will be borne in mind that hotels are required by law to be closed on Sunday, although the licensees are allowed to sell to lodgers and *bona fide* travellers. As the arrests on Sunday show, the law is not greatly respected:—

Convictions for Selling—	Metropolis.	Country.	New South Wales.
Liquor on Sunday, and keeping premises open upon that day ...	113	63	176
During prohibited hours other than upon Sunday	37	43	80
Liquor without a license	20	33	53
Adulterated liquor	16	...	16
Total convictions obtained ...	186	139	325

On pages 426 and 427 are given the number of public-houses licensed in the colony, and the number of Colonial wine licenses current during the last few years.

The average consumption per inhabitant of spirits, wines, and fermented liquors since 1886 is given in the following table; also the total quantity of all classes of intoxicants consumed, expressed in terms of proof spirit. It will be seen that the consumption of intoxicants per inhabitant has declined during the period covered by the table, the quantity in 1896 being nearly 35 per cent. less than in the first year shown:—

Year.	Spirits.	Wines.	Beer.	Equivalent in Alcohol (proof).
	galls.	galls.	galls.	galls.
1886	1·20	0·72	12·32	3·23
1887	1·11	0·73	11·69	2·97
1888	1·10	0·76	11·01	2·88
1889	1·07	0·83	10·89	2·73
1890	1·09	0·73	10·63	2·68
1891	1·11	0·84	11·42	2·83
1892	1·00	0·86	10·91	2·67
1893	0·83	0·84	9·23	2·30
1894	0·77	0·79	8·97	2·17
1895	0·73	0·64	8·96	2·08
1896	0·73	0·61	9·14	2·10

If the number of persons who render themselves liable to arrest may be fairly assumed to be in direct proportion to the amount of intoxicants consumed, a decrease in consumption is necessarily a sign of increased sobriety.

The question of the relative prevalence of drunkenness, as tested by the number of persons arrested for that offence in the different colonies, has received no little attention, and it has been made to appear that New South Wales in this regard holds a bad pre-eminence. The total cases of drunkenness and the number per 100,000 of population in the different colonies, for the year 1895, were as given below :—

Colony.	No of cases of drunkenness.	Per 100,000 of population.
New South Wales	21,144	1,672
Victoria	11,143	944
Queensland	4,993	1,103
South Australia	1,765	497
Western Australia	2,154	2,350
Tasmania	463	291
New Zealand	4,676	675

During 1895 the cases of drunkenness in New South Wales exhibited an increase on those of the previous year, which reached a total of 20,145. In Queensland there was also an increase, both in actual number and in comparison with the population ; in Western Australia there was an increase in the number of cases, but a decline in proportion to the population ; while in New Zealand there was a rise in the number, the percentage remaining stationary. In the other three colonies there was a fall in the actual number of cases of drunkenness, as well as in the proportion of the population charged with this offence. An argument founded solely on the number of cases of drunkenness is misleading, for a great deal depends upon the state of the law and the manner in which it is administered. The extent of the area supervised must also be taken into consideration, for it is evident that the law will be less strictly enforced in the sparsely settled districts of Queensland, South Australia, and Western Australia, than in the more thickly populated parts of Australia. The quantity of intoxicants consumed per head of the community is, perhaps, a better guide, though not always a safe indication, unless the manners and customs of the people are also considered ; but where the habits of communities are so similar as is the case in regard to the Australasian colonies, the consumption per head is a tolerably fair test. The figures for the year 1895 given in the chapter on "Food Supply" may be taken as correct, with some slight hesitation as regards those relating to the consumption of beer in the colonies where no excise duty was enforced, viz., in Queensland and Western Australia. As the table stands, the average consumption of alcohol of proof strength per inhabitant is shown to be 2·08 gallons in New South Wales ; 2·31 in Victoria ; 2·40 in Queensland ; 1·84 in South Australia ; 3·35 in Western Australia ; 1·32 in Tasmania ; and 1·53 gallons in New Zealand ; the average for Australasia being 2·06 gallons. The amount of alcohol consumed is greatest in Western Australia and Queensla
in New South Wales it is somewhat above the average for A
In regard to Western Australia, in dealing with the

intoxicants the circumstance that the males largely exceed the females must not be neglected. If a comparison were made as to the consumption per head, excluding females, the case against Western Australia would be very materially altered. The figures given, however, at once dispose of the theory so persistently put forward as to the excessive prevalence of drunkenness in New South Wales, and the more effectually when it is borne in mind that the number of males engaged in manual labour is far larger here than in most of the colonies with a more favourable record.

There is one notable fact worth recording in connection with this subject. Out of 20,428 arrests for drunkenness in New South Wales in 1895, there were only 6,236 persons born in the colony as compared with 14,192 persons born outside its boundaries. The arrests for drunkenness amongst the native-born were only in the ratio of 1 in 42 of the adult population, as compared with 1 in 26 of the rest of the adult community. It may, therefore, be considered as well established that the Australian native is not given over to the vice of drunkenness.

INQUESTS.

In all cases of violent or unnatural death, death resulting from accident, sudden death, death in a gaol, a lockup, or a hospital; suicide, or death resulting from execution, it is the duty of the Coroner of the district to hold an inquiry into the cause if he has reasonable grounds for believing that death was due to violence or other unnatural means, and for that purpose he is empowered to order the exhumation of a body if necessary, to summon jurors and witnesses, and to commit for trial a person found guilty by the jury of the crime of manslaughter or murder. Every death which takes place in gaol must be investigated. In a district where no coroner has been appointed, or the officer is unable to hold the usual inquest, a magistrate may hold an inquiry; but owing to the fact that he is not empowered to commit a suspected person for trial, he must terminate the inquiry in all cases where facts are disclosed which point to the criminality of a person, and direct the police to prosecute at the nearest police court. The numbers of deaths during 1895, the causes of which were investigated by Coroners or Magistrates, were 969 of males and 251 of females, giving a total of 1,220 inquests and magisterial inquiries. The finding of the courts in 314 cases was that death was due to disease, and in 806 cases to violence, while the cause of death in 100 cases was not clearly defined.

It is provided by Act 24 Vic. No. 10 that when any real or personal property has been destroyed or damaged by fire, the Coroner exercising jurisdiction in the district where the outbreak has occurred shall, if he consider the case to be a fit one for investigation, hold an inquiry with the object of ascertaining the origin of the fire. The procedure is similar to that followed in inquests held in connection with cases of death. The Coroner can, in accordance with the decision of his jury, commit a person for trial on a charge of arson. There are a Coroner and a Deputy-Coroner for Sydney, and 131 Coroners for the country districts, as well as two for the colony generally. Inquiries were held during 1895 into the origin of 157 fires, and the verdict returned was one of accident in 16 cases, of arson in 32, of insufficient evidence in 108 cases, while in one case no verdict was returned.

Superior Courts.—Criminal Jurisdiction.

A Judge of the Supreme Court presides over the Central Criminal Court of Gaol Delivery held at Sydney. All prisoners are tried by a jury of twelve, chosen by lot from the panel provided by the Sheriff. In capital cases the right to challenge, both by the Crown and by the accused, is limited, except for cause shown, to twenty jurors; and in cases other than those in which the sentence of death may be imposed, whether felonies or misdemeanours, the number challenged cannot exceed eight. Under Act 55 Vic. No. 5, which was assented to in December, 1891, a person accused of an indictable offence is privileged, but not compelled, to give evidence in his own behalf. Prior to the passing of this Act such a privilege was only granted to those charged with bigamy. At the close of the case for the prosecution an accused person may also make a statement in his defence without rendering himself liable to examination thereupon, either by counsel for the Crown or by the Court. The verdict of the jury must be unanimous, for even if eleven jurors were agreed their verdict could not be accepted. If the jury disagree in the first instance they may be locked up until they either come to a verdict or are discharged by the Court. If no verdict is returned the prisoner is liable to be tried over again by another jury.

In addition to the supreme, civil, and criminal sittings of the Court held in Sydney, the Judges go on circuit once in each half-year, and hold Courts of Gaol Delivery, called Circuit Courts, for dealing with the more serious class of criminal cases, especially those in which the capital penalty is involved, and for hearing civil causes at certain circuit towns, viz.:—In the north, at Maitland, Tamworth, Armidale, and Grafton; in the west, at Mudgee, Bathurst, Dubbo, and Broken Hill; and in the south, at Goulburn, Yass, Wagga Wagga, Albury, Deniliquin, Young, and Hay.

The Courts of Quarter Sessions are presided over by Chairmen, who also perform the duties of Judges of the District Courts. There are seven Chairmen of Quarter Sessions; two of these preside over the Courts in the Metropolitan and Suburban and Hunter Districts, and one each in the following districts:—Southern, south-western, northern, north-western, and western. All offences except those involving the capital penalty are within the jurisdiction of the Court. On the trial of prisoners at Quarter Sessions, the Chairman, at the request of the prisoner's counsel, must reserve questions of law for the consideration of the Supreme Court, or he may so act *motu proprio*.

During the year 1895 there were 1,380 males and 116 females committed for trial in the Superior Courts of the colony. Of these 1,496 persons, 1,454 were committed by magistrates, before whom they had been brought up at Petty Sessions; 34 by coroners, 9 being accused of murder, 20 of manslaughter, and 5 of arson; and 4 each by Chairman of Quarter Sessions and Judges of the Supreme Court, perjury being the charge in every case. The number of persons committed during any one year does not, of course, coincide with the number placed on trial during the same period, as some persons committed at the end of one year do not make their appearance until the following year. Excluding those against whom the Attorney-General filed no bill, there were 1,340 persons recorded in the returns of the Superior Courts of the colony during 1895, 1,231 being males and 109 females. The following table shows the manner in which these accused persons were dealt with:—

How dealt with.	Central Criminal and Circuit Courts.		Courts of Quarter Sessions.		All Superior Courts.	
	Males.	Females.	Males.	Females.	Males.	Females.
Convicted—						
Sent to Gaol	155	14	561	34	716	48
Liberated under First Offenders' Act	16	1	77	13	93	14
Acquitted	92	14	271	26	363	40
Jury disagreed	7	...	...	...	7	...
Remanded	17	1	...	..	17	1
Bound over	...	...	4	1	4	1
Not proceeded against	1	1	30	4	31	5
Total persons	288	31	943	78	1,231	109

Classifying these accused persons according to the nature of the offences with which they were charged, it will be found that, both in the case of males and of females, offences against property without violence are the most numerous, followed by offences against the person and offences against property with violence. Forgery and offences against the currency furnish the next highest rate of males; but this class of crimes is least practised by women, the number of female offenders being but 4 as against 76 male offenders. Below will be found a statement of the offences of which the 1,340 persons dealt with in superior courts during 1895 were accused, with the rates per 100,000 of population:—

Offences.	Males.		Females.		Persons.	
	Number	Per 100,000 of population.	Number	Per 100,000 of population.	Number	Per 100,000 of population.
Offences against the person	370	54·5	34	5·8	404	31·9
Offences against property with violence	186	27·4	12	2·1	198	15·7
Offences against property without violence	529	77·9	41	7·0	570	45·1
Forgery and offences against the currency	76	11·2	4	0·7	80	6·3
Offences against good order	9	1·3	9	1·5	18	1·4
Offences not included in preceding	61	9·0	9	1·5	70	5·5
Total	1,231	181·3	109	18·6	1,340	105·9

The following statement shows the character of the principal offences for which prisoners were tried during each year since 1886, and affords material for interesting study. Cases which from various causes were not proceeded with are included under the heading of "Other Offences" in the table; while since 1892 the returns have allowed of the exclusion of those persons against whom the Attorney-General found no bill:—

Offences.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Murder	17	11	22	18	9	17	7	15	18	10
Attempted murder	5	7	9	9	8	7	6	7	4	6
Manslaughter	25	7	22	16	25	25	19	58	16	31
Wounding maliciously, unlawfully.	115	86	109	65	118	116	111	121	119	102
Rape, and attempts to commit	41	7	16	12	14	21	18	14	14	17
Assaults on children	18	32	28	27	24	16	26	18	8	15
Indecent assaults	20	26	28	23	35	43	48	40	30	42
Unnatural offences	14	18	13	10	35	20	29	15	12	6
Arson	23	10	15	23	21	22	21	17	38	27
Robbery with violence, including garrotting.	57	60	47	79	47	39	40	50	50	71
Larceny and receiving stolen property.	251	225	186	267	237	263	261	228	279	210
Stealing in a dwelling, including burglary.	125	115	178	166	91	84	154	78	85	73
Forgery and uttering	129	95	114	109	87	89	147	79	81	65
Stealing from the person	61	44	54	70	56	61	44	37	50	38
Obtaining money, etc., under false pretences.	70	96	70	87	94	78	57	52	48	46
Embezzlement	39	38	47	38	25	60	48	24	22	27
Horse-stealing	78	76	70	71	74	50	40	63	54	51
Cattle-stealing	24	26	22	25	26	35	19	15	17	25
Sheep-stealing	33	18	19	20	19	4	14	28	16	40
Perjury	8	7	21	15	9	14	46	31	3	23
Other offences	460	498	457	430	500	516	434	351	378	415
Total Committals	1,618	1,502	1,547	1,575	1,554	1,575	1,589	1,336	1,342	1,340

NOTE.—This table has been amended since last issue.

The scope of this work does not admit of the particulars of offences being set out in great detail, but if the returns be analysed it will be found that, as experience has shown elsewhere, the seasons have a marked effect upon conduct; besides this, however, there is apparently a periodicity in crimes sufficiently curious to afford food for speculation. Perhaps the strongest examples of this periodicity are in connection with crimes of blood, *i.e.*, those of murder, manslaughter, and maliciously wounding; and with crimes against females, and unnatural offences.

GAOLS.

There are in New South Wales 60 gaols of all kinds; of these 8 are principal gaols, 15 minor gaols, and 37 police gaols. There is accommodation for 1,992 prisoners in separate cells, and for 5,349 when more than one prisoner sleeps in a cell, exclusive of the accommodation afforded by 22 separate cells in the lunatic ward of Parramatta Gaol, and of that for 108 prisoners in the "associated huts" at Trial Bay Prison. On the 31st December, 1895, there were 2,497 prisoners, exclusive of debtors, in confinement, thus distributed:—

Prisons.	Prisoners.	Accommodation—one prisoner per cell.	Accommodation—more than one prisoner per cell.
Principal gaols	1,887	1,509	3,682
Minor gaols	401	267	925
Police gaols	209	216	742
Total	2,497	1,992	5,349

The total number of prisoners received under sentence into the various gaols throughout the colony during the year 1895 was 13,602, exclusive of debtors. Of these, 5,509 were received at Darlinghurst Gaol, and 2,780 at Biloela Gaol, Sydney. The following table gives the number of prisoners received into gaol under sentence for the last ten years:—

Year.	Males.	Females.	Total.
1886	12,650	4,382	17,032
1887	11,554	3,728	15,282
1888	10,519	3,712	14,231
1889	9,299	3,583	12,882
1890	9,203	3,084	12,287
1891	9,553	3,257	12,810
1892	10,677	3,106	13,783
1893	10,704	3,149	13,853
1894	10,436	3,100	13,536
1895	10,472	3,130	13,602

The returns relating to gaols subsequent to the year 1886 have been subjected to the most careful scrutiny, and may be taken as in every respect correct, but there is no such certainty in regard to the figures of 1886 and previous years, and it is quite possible that, owing to double counting, the total given above for 1886 may be in excess of the truth. When every allowance is made on this score, however, it may with confidence be asserted that the number of persons received into gaols, as compared with population, is greatly decreasing; indeed, the actual number was less in 1895 than ten years previously.

The average number of persons in confinement during the year has not been ascertained, but the number in detention at the close of each year is known, and the figures for ten years will be found in the following statement. Taking one year with another, these figures may be accepted as fairly representing the average daily number for each year given. Prisoners have been classified under two heads—those under sentence, and those awaiting trial. Debtors are excluded, except in 1886 and 1887, the returns for which years do not allow of the distinction being made :—

Year.	In confinement.			Under sentence.	Awaiting trial.
	Males.	Females.	Total.		
1886	2,119	382	2,501	2,387	114
1887	2,053	327	2,380	2,235	145
1888	2,035	309	2,344	2,223	121
1889	2,036	322	2,358	2,233	125
1890	2,138	281	2,419	2,290	129
1891	2,325	291	2,616	2,489	127
1892	2,345	268	2,613	2,484	129
1893	2,232	208	2,440	2,295	145
1894	2,350	252	2,602	2,469	133
1895	2,257	240	2,497	2,345	152

As in the case of the arrests, the largest number of prisoners at any age-period is of those whose ages range from 25 to 30 years, while proportionately to the population this age-group is also most productive of criminals, with 2,708 per 100,000 inhabitants; followed by 35 to 40 years, with 2,443; 40 to 45 years, with 2,340; and 30 to 35 years, with 2,334 per 100,000 of population. The following table gives the number and ages of persons sentenced to penal servitude, labour, or imprisonment during the year 1895. Six of the males sentenced to death had the sentence commuted :—

Ages.	To Death.	To Penal Servitude.		To Imprisonment.						Total Prisoners Sentenced.		
				With Labour.			Without Labour.					
	Males.	Males.	Females.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
7 and under 15...	...	...	...	18	...	18	37	2	39	55	2	57
15 ,, 20...	1	3	...	276	41	317	387	55	442	667	96	763
20 ,, 25...	...	8	...	382	149	531	491	285	776	881	434	1,315
25 ,, 30...	2	44	...	1,169	127	1,296	1,401	499	1,900	2,616	626	3,242
30 ,, 35...	...	23	...	745	180	925	1,002	369	1,371	1,770	549	2,319
35 ,, 40...	...	19	...	509	127	636	824	371	1,195	1,352	498	1,850
40 ,, 45...	4	8	...	360	94	454	674	261	935	1,046	355	1,401
45 ,, 50...	...	5	1	113	69	182	593	193	786	711	263	974
50 ,, 55...	...	7	...	185	38	223	304	82	386	496	120	616
55 ,, 60...	...	1	...	107	28	135	218	54	272	326	82	408
60 and over	...	6	...	217	22	239	329	83	412	552	105	657
Total	7	124	1	4,081	875	4,956	6,260	2,254	8,514	10,472	3,130	13,602

Taking the returns from all the gaols, it will be found that 9,165 distinct persons were convicted during the year 1895, of whom 7,796 were males, and 1,369 were females. The following table shows the number of distinct persons of the male sex in age groups who were convicted once and more than once during 1895, any convictions they may have undergone in previous years being disregarded. In the figures given the returns from all the gaols have been combined, and each person debited with the total number of sentences received, whether served in one prison or in more than one.

Ages.	Males Convicted during 1895, with Ages and Number of Times Convicted.																
	1	2	3	4	5	6	7	8	9	10	12	13	14	16	20	23	Total.
7 and under 8	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
9 ,, 10	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
10 ,, 11	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
11 ,, 12	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
12 ,, 13	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10
13 ,, 14	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6
14 ,, 15	29	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30
15 ,, 16	37	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	39
16 ,, 17	62	7	..	1	..	..	..	..	..	..	..	..	..	..	..	..	70
17 ,, 18	104	8	3	..	..	..	..	..	..	..	..	..	..	..	..	..	115
18 ,, 19	117	21	2	3	1	..	..	1	1	..	..	..	..	..	..	..	146
19 ,, 20	145	21	6	3	..	..	..	..	..	..	..	..	..	..	..	..	175
20 ,, 21	130	18	2	1	..	..	..	..	..	..	..	..	..	..	..	..	151
21 ,, 25	481	71	18	7	..	..	..	..	..	..	..	..	..	..	..	..	577
25 ,, 30	1,592	275	82	23	11	6	3	8	..	..	..	..	..	..	..	..	1,995
30 ,, 35	1,020	181	51	28	7	3	3	2	..	1	..	..	..	..	..	1	1,297
35 ,, 40	756	132	39	18	10	2	7	4	..	..	..	..	..	..	..	..	968
40 ,, 45	547	96	34	14	4	3	..	3	1	..	..	2	..	2	1	..	707
45 ,, 50	407	56	21	10	5	..	1	1	..	1	1	1	1	..	..	..	505
50 ,, 55	307	62	10	6	1	1	..	..	..	..	..	..	..	..	..	..	387
55 ,, 60	182	32	9	5	3	1	..	..	..	..	1	..	..	..	..	..	233
60 ,, 65	134	29	10	3	3	3	1	..	..	..	..	..	..	..	..	..	183
65 ,, 70	75	19	6	3	1	..	..	..	..	..	..	..	..	..	..	..	104
70 ,, 75	38	3	2	1	1	1	..	..	..	..	..	..	..	..	..	..	46
75 ,, 80	24	2	2	1	1	..	1	..	..	..	..	..	..	..	..	..	31
80 and upwards	12	..	1	..	...	..	..	..	..	..	..	..	..	..	..	..	13
Total ..	6,223	1,035	299	127	48	20	16	14	2	2	2	3	1	2	1	1	7,796

These figures disclose some interesting facts. It is sad to see that the large number of 93 boys of 15 years and less had to be sent to gaol; but it is well known that the problem of dealing with juvenile offenders is one of the most serious and embarrassing that the magistrates have to cope with, especially as, until the month of August of the year under review, there was no Reformatory in the colony to which boys of the criminal class could be sent. In the absence of such an institution, the magistrates, unwilling to subject boys of tender age to the contaminating influences of a gaol, generally ignored the criminal charges and sent them to the nautical school-ship Sobraon as deserted or neglected children. This, though the lesser of two evils, was manifestly unfair to the class of children for whom the Sobraon was primarily intended, and largely increased the difficulties of its management. Some few years ago extensive buildings were erected at Rookwood for the accommodation of criminal boys, but they were put to other uses. The Carpentarian Reformatory has now been established for boys who have been convicted of criminal offences. Particulars of the Institution are given under Education and Social Condition and Charities.

A remarkable feature of the foregoing table is the large number of persons sent to gaol more than once during the year. The prisoners with two or more convictions numbered 1,573, while their convictions were 4,249. The list of second convictions commences with a boy of 14 years and ends with two men who had passed their seventy-fifth year; the third convictions are headed by a lad of 15, and so on, as the list shows. One man, whose age was between 30 and 35 years, was convicted no less than 23 times, and another man, between 40 and 45, was convicted 20 times during the year. The number of males under 21 years of age sent to gaol was 750, and of these 102 were convicted more than once.

There were 1,369 females imprisoned during the year 1895, of whom the large proportion of 577, or 42 per cent., were convicted more than once. The convictions of girls under 21 years of age numbered 103, and of these 30 were imprisoned more than once. One woman was convicted as many as 23 times during the year, two had 18 convictions recorded against them, and three were convicted 17 times. A woman, whose age was over 65 years, was convicted 7 times during the year. The following table shows the number of females imprisoned, their ages, and number of convictions during the year:—

Ages.	Females Convicted during 1895, with Ages and Number of Times Convicted.																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	23	Total.
11 and under 12	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
13 ,, 14	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
15 ,, 16	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
16 ,, 17	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7
17 ,, 18	10	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12
18 ,, 19	18	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22
19 ,, 20	16	6	..	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..	26
20 ,, 21	19	3	3	5	1	1	..	..	..	..	..	..	..	..	..	..	..	..	32
21 ,, 25	95	23	22	4	12	2	1	2	1	..	1	..	1	..	..	..	1	..	165
25 ,, 30	167	52	19	16	11	4	6	2	3	1	3	1	..	..	1	..	..	..	286
30 ,, 35	119	38	13	11	9	14	3	1	6	2	1	..	1	..	1	..	..	..	219
35 ,, 40	108	33	19	18	9	4	2	3	3	2	..	..	1	2	..	..	..	..	204
40 ,, 45	77	21	11	13	5	5	2	..	..	1	..	1	2	..	..	2	..	..	140
45 ,, 50	63	16	10	6	5	2	..	1	2	1	1	..	1	..	..	1	..	..	109
50 ,, 55	44	13	5	2	1	1	..	2	..	..	..	..	..	..	..	..	..	..	68
55 ,, 60	20	5	4	1	3	2	..	..	1	..	..	..	..	..	..	..	..	..	36
60 ,, 65	13	2	..	1	..	2	..	..	..	..	..	..	..	..	..	..	1	..	19
65 ,, 70	10	3	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	16
70 ,, 75	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
75 ,, 80	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Total ..	792	223	107	80	56	38	15	11	16	7	6	2	6	2	2	3	2	1	1,369

Formerly there existed near the south head of Port Jackson a Reformatory to which girls under 16 years of age who had fallen into crime could be sent; and at present a part of the Industrial School for Girls at Parramatta is set apart for reformatory purposes.

The persons who figure in the two preceding tables as having been convicted several times during the year are the drunkards, the vagrants, and the petty thieves. Naturally the more serious offenders are rarely afforded an opportunity of appearing before the Courts twice in one year.

The punishments awarded to offenders vary from nominal imprisonment to the supreme penalty of death. Prisoners under sentence of hard labour are, after examination by the medical officer, given such work as the prison authorities consider comes within the meaning of the sentence. Penal servitude is not awarded for a shorter term than three years. In the case of male prisoners it is taken to mean hard labour on the roads or other public works, and in the case of female prisoners, hard labour in gaol. The punishment is practically the same as hard labour. Prisoners undergoing a sentence of imprisonment without labour are treated differently from others, and if they entirely maintain and clothe themselves they are exempted from any work, otherwise they contribute to their own support by performing such labour as may be provided. Under section 405 of the Criminal Law Amendment Act a prisoner who has been convicted of a felony attended with violence to the person, or committed by the offender when armed, or by means of any threat, is liable to be kept in irons for a portion of his term of imprisonment, but not extending beyond the first three years.

The effect of punishment in reforming criminals, or in restraining them from the commission of crime, is a subject upon which a great deal has been written. It is certain that in New South Wales there has been a great decrease in crime, but it seems equally certain that this satisfactory state of things is due to an improvement in the material and intellectual condition of the whole community, and not to any deterrent effect which punishment has had upon the criminal.

A summary of sentences imposed upon offenders affords little clue to the gravity of the offences committed. Thus, for simple larceny the sentences of imprisonment ranged from 2 days to 5 years; for common assault, from 2 days to 2 years; for maliciously injuring property, from 2 days to 2 years; for receiving stolen property, from 2 days to 5 years; for begging alms, from 2 days to 6 months; for contempt of Court, from 2 days to 1 year; and for perjury, from 1 month to over 10 years. The great anomaly disclosed by these sentences might disappear if the circumstances attending each individual case were considered, but the scope of this work only admits of the facts in regard to the sentences themselves being recorded.

The following summaries give a classification for 1895, according to the length of the sentences and the nature of the offences; the two previous tables show the number of distinct persons sentenced, while the figures in the two following statements refer to the number of offences punished, the same person in some instances having been sentenced several times in the course of the year :—

Offences.	Total Offences.	Imprisonment for										Death.
		2 days and under.	3 days and under 1 week.	1 week and under 1 month.	1 month and under 6.	6 months and under 12.	1 year and under 2.	2 years and under 5.	5 years & under 10.	10 years & under 15.	Until order complied with, &c.	
Offences against the person	1,044	4	6	310	454	71	66	54	10	4	58	7
Offences against property with violence	250	2	...	70	68	30	21	53	6	...	...	...
Offences against property without violence	2,256	16	14	476	1,159	364	99	96	31	1	...	...
Forgery and offences against the currency	55	...	...	1	1	14	19	17	3	...	...	...
Offences against good order	6,166	926	1,095	2,699	1,316	128	2	...	...	...	...	...
Offences not included in the preceding	701	65	90	353	130	18	11	18	4	1	11	...
Total offences committed by males	10,472	1,013	1,205	3,909	3,128	625	218	238	54	6	69	7

It will be seen that the sentence of death was passed on seven males. In one case only was it carried out, and in the other six cases it was commuted to imprisonment for life. The crime for which the sentence was carried out was attempt to murder, while those for which it was commuted were murder, attempt to murder, rape, and carnal knowledge of a girl under 10 years of age. Of the persons included in the column "Until order complied with, etc.," 58 were wife and child deserters against whom there were unsatisfied maintenance orders, and the remaining 11 persons were ordered to be imprisoned during the pleasure of the Court for contempt.

The classification of sentences according to their length and the nature of the offences for which females suffered imprisonment in 1895 is given below. In 14 cases only, out of 3,130, was the length of sentence one year or over. The terms for which women are sentenced are much shorter than those of men, as their offences, generally speaking, are much lighter :—

Offences.	Total Offences.	Length of Sentences.						
		2 days and under.	3 days and under 1 week.	1 week and under 1 month.	1 month and under 6.	6 months and under 12.	1 year and under 2.	2 years and under 5.
Offences against the person ...	60	2	1	28	19	6	1	3
Offences against property with violence	45	...	...	27	15	...	1	2
Offences against property without violence	187	2	2	60	98	21	3	1
Forgery and offences against the currency	1	...	...	...	...	1	...	...
Offences against good order...	2,812	196	353	1,526	693	43	1	...
Offences not included in the preceding..................	25	2	5	10	6	...	...	2
Total offences committed by females	3,130	202	361	1,651	831	71	6	8

Allusion has already been made to the number of persons with more than one conviction recorded against them during 1895. It is interesting to compare these figures with the records of previous years, which are given below as far back as 1889, beyond which year the statistics of reconvictions are not entirely reliable. The table also gives a statement of the average number of offences committed by each person confined:—

Year.	Prisoners sent to Gaol more than once.		Offences Committed.		Average number of Offences Committed.	
	Males.	Females.	Males.	Females.	Males.	Females.
1889	1,224	663	3,126	2,539	2·6	3·8
1890	1,196	565	3,165	2,201	2·7	3·9
1891	1,285	584	3,431	2,457	2·7	4·2
1892	1,787	586	4,828	2,326	2·7	4·0
1893	1,642	567	4,141	2,328	2·5	4·1
1894	1,572	576	4,093	2,331	2·6	4·0
1895	1,573	577	4,249	2,338	2·7	4·1

From the evidence of the above table there would appear to be a constant reappearance of the same faces before the Courts to account for so high an average of reconvictions. The proportion of habitual offenders, if those with previous convictions may be so termed, is remarkable, and will perhaps be better illustrated by the following table than by the one just given. The returns only include convictions within the year named, convictions in a previous year being disregarded. If all convictions had been included, the proportion for 1895 would, in all likelihood, have been about 28 per cent. :—

Year.	Percentage of prisoners with previous convictions.	Year.	Percentage of prisoners with previous convictions.
1886	26·4	1891	21·3
1887	25·4	1892	26·4
1888	25·3	1893	23·6
1889	22·5	1894	23·3
1890	22·2	1895	23·5

It is to be regretted that at present it is impossible to give more information concerning prisoners with previous convictions than is recorded in the previous table and on page 417 ; but for future issues of this book statistics of this kind will be available. The International Union for Criminal Legislation, for the purpose of strengthening society in its defence against "the enemy," recommends the introduction of an elaborate system under which notice of every conviction for crime shall be sent by the police to the office in which the birth of the convicted person was registered, so that the Registrar of the district may be enabled to keep a record of the career of a criminal from birth to death. Apart, however, from the costliness of the system, the times are not yet ripe for such an innovation ; and even if it were adopted, it would be several years before results of any value for statistical purposes could be obtained.

The number of distinct persons committed to gaol under sentence during each of the past ten years is given in the following table. The number fluctuated considerably during the period under review, but there is ample evidence in this table, taken in conjunction with that on page 397, showing the trials in the superior courts, that crime is steadily diminishing :—

Year.	Persons.	Year.	Persons.
1886	11,474	1891	8,791
1887	9,046	1892	8,957
1888	10,096	1893	9,369
1889	8,827	1894	9,215
1890	7,939	1895	9,165

Under Act 4 Vic. 29 a Visiting Justice is appointed to visit each gaol. He is empowered to hear and determine all complaints which may be made against a prisoner of disobeying the rules of the gaol, or of having committed any offence, and may pass a sentence of confinement in a solitary cell for a term not exceeding seven days. In cases of persistent insubordination, a charge upheld before two or more Justices of the Peace renders the prisoner liable to a sentence of close confinement for one month; and if the culprit is a prisoner convicted of felony, or serving a sentence of hard labour, a punishment of personal correction may be awarded. Eight sentences of whipping were carried out in 1895. The number of punishments inflicted upon refractory prisoners during the last ten years is given as follows:—

Year.	Prisoners punished in gaols.			Percentage of total prisoners punished.
	Solitary confinement.	Other punishment.	Total.	
1886	1,420	389	1,809	9·2
1887	1,445	416	1,861	10·5
1888	1,302	246	1,548	9·3
1889	1,195	331	1,526	10·0
1890	1,458	266	1,724	11·8
1891	1,235	304	1,539	10·1
1892	1,412	317	1,729	10·5
1893	1,053	234	1,287	10·9
1894	982	300	1,282	11·0
1895	1,077	228	1,305	11·1

There were 74 persons—70 males and 4 females—imprisoned for debt during the year 1895. As the time of detention as a rule only extended for a short period, the number of debtors in confinement at any one time was not large, and on the 31st December, 1895, there were only 3 persons in gaol for debt. The number of persons sent to gaol for debt during each of the last ten years will be found in the following table:—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1886	61	1	62	1891	45	...	45
1887	48	2	50	1892	54	...	54
1888	56	1	57	1893	55	3	58
1889	71	1	72	1894	54	4	58
1890	59	2	61	1895	70	4	74

The following table gives the number of the prisoners employed in the principal and minor gaols at the end of 1895, and those engaged in the principal callings. In some of the gaols there are no means of finding suitable employment of a profitable or useful nature, otherwise the number shown could be very much increased; and it must also be remembered that there are many prisoners whose services are not available for labour, such as those whose sentences do not carry hard labour, and those exempt from work on account of medical and other reasons. The net value of the labour done during 1895 amounted to £21,817, exclusive of the value set upon the labour of the prisoners engaged in the construction of the breakwater at Trial Bay, and of ordinary labour directly connected with the gaols.

Carpenters and assistants	38	Bookbinders	25
Painters	21	Writers	29
Blacksmiths and assistants	28	Washing	65
Tinsmiths	18	School assistants	5
Masons	8	Hospital attendants	29
Stonecutters and assistants	31	Barbers	20
Labourers	290	Needlework	56
Brushmakers	11	Sweepers and cleaners	306
Matmakers	63	Cooks' Assistants	99
Shoemakers	120	Other employments	541
Tailors	115		
Hatmakers	25	Total employed	1,943

Among those classed as engaged in "other employments" are included 45 prisoners working at the Trial Bay Breakwater. Prisoners under sentence of penal servitude, of hard labour on the roads and public works, or of imprisonment with hard labour, become eligible for employment upon the public works at Trial Bay Prison under the following conditions:—Prisoners under sentence of from three to five years, who have not been punished for misconduct within the previous six months, and are favourably recommended by their gaolers, at a period twelve months before they would become eligible for discharge under the ordinary remission regulations, and in anticipation of such discharge; under sentence of five to ten years, with similar conditions as regards conduct, at a period of eighteen months anterior to discharge; and under sentence of ten years and upwards, at a period of two years anterior to discharge. The construction of the breakwater is being supervised by officers of the Public Works Department, and the prisoners engaged in the work, who are entirely under the control of the Comptroller-General of Prisons, receive a small sum of money, and are supplied with rations, as well as with clothing which is not of the prison pattern.

Besides the foregoing, there were at the close of the year 1895 as many as 348 prisoners who were not employed. The reasons for such exemption will be found in the following statement:—

In hospitals	53	Incapable	25
In cells	8	Recent arrivals, not set to work	41
Under medical treatment	32	Not under sentence (including debtors)	130
Exempt from work	42		
Prisoners' delegates	14		
Keeping themselves	3	Total	348

Persons whose cases have not yet been disposed of are allowed to see their legal advisers and others who may visit them in reference to their trial. It is not required that they shall wear prison clothing; and other privileges, consistent with safe custody, are granted to them. Persons under examination are not allowed to have any communication made to them while in the prison except by their legal advisers, unless such a proceeding is specially sanctioned by the Justice conducting the examination.

By continuous good conduct and industry prisoners become eligible for a remission of sentence, in accordance with the following scale:—Sentences not exceeding five years, one-sixth of the term; sentences beyond five but not exceeding ten years, one-fifth of the term; and sentences of more than ten years, one-fourth of the term. Prisoners who are serving a sentence of not more than twelve months, or who have had the death penalty commuted, do not enjoy these privileges; but the circumstances of their cases may be considered by the Minister for Justice, who has power to recommend to the Governor, either on his own responsibility or after consultation with his colleagues in Cabinet, the remission of part of such sentences.

Under section 409 of the Criminal Law Amendment Act a prisoner under sentence may be granted a written license to be at large within specified limits during the unexpired portion of his sentence. Sureties are required, unless under exceptional circumstances, for good behaviour and observance of the conditions of the license. The prisoner who is liberated is required to report himself periodically to the police, and is liable to have his license cancelled and to be committed to gaol to undergo the remainder of his sentence upon any breach of the conditions upon which he was released. This system was first adopted in September, 1891, and at the end of 1895 it had been put in force in 69 cases—those of 66 males and 3 females. Of the 69 licenses issued, there were on December 31, 1895, 24 still in force, 33 had expired, and in 10 cases the balance of the sentence had been remitted and the license cancelled, while in only 2 cases was the license-holder returned to gaol to complete his sentence.

When the neglected state in which many of the prisoners are received is considered, it may be said that the death-rate in gaols is light, and it shows, moreover, signs of decreasing. A comparison between the death-rate in gaols and that of the general population it is difficult to make, but it may be said generally that the death-rate of all persons received into gaol is at present not greater than that of the general population of like ages, while the death-rate of habitual criminals is largely below the average. In the following table the number of deaths, exclusive of those resulting from executions, is given for 1875 and subsequent periods, together with the death-rate per 1,000 of the average of prisoners in confinement during the year. This average l obtained for every year by taking the mean of the numbers in confinement at the end of that year and at the end of the preceding year :—

Year.	Deaths.			Death-rate per 1,000 persons in confinement.
	Males.	Females.	Total.	
1875	34	8	42	31·50
1880	37	...	37	18·85
1885	39	11	50	19·90
1890	24	2	26	10·45
1891	37	3	40	15·89
1892	36	4	40	15·30
1893	28	6	34	13·45
1894	22	2	24	8·73
1895	19	3	22	8·63

Since 1893 returns have been obtained of the height of all persons committed to gaol, and the following results, which relate to the 7,796 males incarcerated during 1895, are given merely as a curiosity of criminal statistics. No comparison with the general population can be made, as no data for such a comparison exist :—

Height.	Age Groups.											Total.
	Under 15.	15 and under 20.	20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and under 45.	45 and under 50.	50 and under 55.	55 and under 60.	60 and over.	
Under 4 ft. 6 in. ..	9	1	..	1	..	..	1	..	..	..	..	12
4 ft. 6 in.	6	3	..	..	..	..	..	..	..	..	..	9
4 ft. 7 in.	3	1	..	..	..	..	..	..	..	..	1	5
4 ft. 8 in.	3	1	1	..	..	1	..	..	..	..	..	6
4 ft. 9 in.	6	..	..	2	..	1	..	..	..	..	..	9
4 ft. 10 in.	5	7	..	..	1	..	2	..	2	..	..	17
4 ft. 11 in.	1	15	4	3	2	2	1	2	..	1	3	34
5 ft.	5	17	8	10	5	5	5	2	2	..	5	64
5 ft. 1 in.	2	16	7	27	21	16	11	15	8	6	5	134
5 ft. 2 in.	6	47	22	40	41	30	21	16	12	9	17	261
5 ft. 3 in.	4	43	28	80	60	50	43	31	21	13	28	401
5 ft. 4 in.	4	71	64	132	85	85	57	55	51	14	35	653
5 ft. 5 in.	..	82	95	226	132	118	94	53	45	35	61	941
5 ft. 6 in.	..	77	120	302	206	153	100	73	52	45	64	1,192
5 ft. 7 in.	..	66	108	318	217	134	113	79	61	25	49	1,170
5 ft. 8 in.	..	50	101	297	179	138	81	74	56	34	33	1,043
5 ft. 9 in.	..	23	75	245	131	77	78	42	32	21	42	766
5 ft. 10 in.	..	11	40	140	118	69	46	36	22	16	19	517
5 ft. 11 in.	..	11	35	80	43	47	[illegible]	18	[illegible]	8	7	286
6 ft.	..	1	16	68	33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	175
6 ft. 1 in.	..	2	3	24	12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63
6 ft. 2 in.	..	..	1	8	9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25
6 ft. 3 in.	..	..	..	3	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10
6 ft. 5 in.	..	..	..	..	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2
6 ft. 9 in.	..	..	..	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1
Total	54	545	728	1,995	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

A similar return relating to the 1,369 females committed to gaol in the course of the year 1895 shows the following results :—

Height.	Age Groups.											Total.
	Under 15.	15 and under 20.	20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and under 45.	45 and under 50.	50 and under 55.	55 and under 60.	60 and over.	
Under 4 ft. 6 in. ..	..	1	1	1	1	..	..	1	..	..	..	5
4 ft. 6 in.	..	..	1	..	..	..	..	..	..	..	..	1
4 ft. 7 in.	..	1	..	..	..	..	..	..	..	..	..	1
4 ft. 8 in.	1	1	2	1	3	2	2	1	1	..	1	15
4 ft. 9 in.	..	2	3	2	2	2	3	3	1	1	1	20
4 ft. 10 in.	..	2	7	6	9	8	4	7	..	3	3	49
4 ft. 11 in.	..	5	8	15	18	11	8	..	4	2	3	74
5 ft.	1	15	21	33	33	16	24	14	8	9	12	186
5 ft. 1 in.	..	7	22	35	28	37	19	13	11	4	5	181
5 ft. 2 in.	..	14	42	52	26	40	30	18	9	6	2	239
5 ft. 3 in.	..	7	39	46	35	37	16	17	15	6	4	222
5 ft. 4 in.	..	9	22	45	29	23	6	12	3	3	6	158
5 ft. 5 in.	..	4	14	31	18	18	15	13	7	..	1	121
5 ft. 6 in.	..	1	12	11	10	5	7	5	3	..	..	54
5 ft. 7 in.	..	..	1	4	2	2	5	2	3	2	..	21
5 ft. 8 in.	..	..	1	1	4	2	1	1	3	..	1	14
5 ft. 9 in.	..	..	1	2	..	..	..	2	..	..	..	5
5 ft. 10 in.	..	..	..	1	1	1	..	..	..	..	..	3
Total	2	69	197	286	219	204	140	109	68	36	39	1,369

CAPITAL PUNISHMENT.

In the early days of settlement the spectacle of judicial executions must have been extremely common. Offences which are now summarily dealt with by magistrates, and deemed sufficiently punished by imprisonment for two or three months, were in some cases punishable by death. This barbarous system lasted until about the year 1832, when the offences of stealing from a dwelling money or goods to the value of £5, and of killing or stealing horses, cattle, or sheep, were removed from the category of capital crimes. Five years later the punishment of death was abolished in the following cases:—Riotous destruction of buildings and machinery, riotous assembling, rescue of a person convicted of murder, seducing a person in the Royal Navy from duty, inciting to mutiny, administering unlawful oaths purporting to bind the person taking the same to commit any treason or murder, breaking prison, escaping from lawful custody more than once, smuggling while armed, shooting at any vessel, or maliciously shooting or maiming any officer of the Navy or Revenue Service. Executions have been less numerous of late years than formerly, the dread penalty being carried out in only a small proportion of cases wherein the death sentence has been pronounced. The number of executions since 1825 is given herewith. In three years only have there been no executions. Four females have been hanged during the period in question:—

Year.	Convictions.	Executions.	Year.	Convictions.	Executions.	Year.	Convictions.	Executions.
1825	54	9	1849	6	4	1873	10	4
1826	72	21	1850	5	4	1874	14	3
1827	93	29	1851	8	2	1875	8	2
1828	106	28	1852	10	5	1876	15	4
1829	112	52	1853	4	2	1877	9	2
1830	136	50	1854	11	6	1878	12	1
1831	143	32	1855	12	5*	1879	21	1
1832	156	12	1856	7	......	1880	21	4
1833	135	31	1857	9	4	1881	6	2
1834	148	44	1858	9	1	1882	14	3
1835	142	40	1859	10	7	1883	9	1
1836	79	26	1860	11	5*	1884	8	2
1837	90	12	1861	32	2	1885	11	3
1838	130	19	1862	18	6	1886	22	2
1839	53	22	1863	16	6	1887	4	4
1840	13	8	1864	5	2	1888	17	2
1841	27	18	1865	10	3	1889	4	3*
1842	47	13	1866	20	6	1890	2	1
1843	22	8	1867	19	4	1891	6	3
1844	22	8*	1868	13	5	1892	4	1
1845	15	3	1869	6	......	1893	8	5
1846	11	1	1870	3	......	1894	8	5
1847	10	6	1871	11	3	1895	7	1
1848	6	5	1872	19	3			

* One female.

During the seventy-one years embraced in the table just given, 2,336 persons were sentenced to death, and of these, 1,736 were condemned during the first eighteen years. For the whole period the executions numbered 641, of which 466 were carried out during the first eighteen years. A study of the statistics of judicial executions in New South Wales prior to the year 1842 will make it abundantly plain that the barbarous system of taking life for insufficient cause, so far from striking terror into the hearts of would-be criminals, had the effect of lowering the moral tone of the whole community, and, therefore, of making some of its members more prone to commit the very offences which the punishment was intended to prevent. The death penalty is now awarded to murder, attempt at murder, rape, attempt at rape, and setting fire to a dwelling knowing that there is a person therein; it is, however, generally carried out for murder only. The following statement shows the number of convictions and executions for the offences named for a period of twenty-five years :—

Year.	Murder and Attempt at Murder.		Rape.		Attempts at Rape. (Convictions.)
	Convictions.	Executions.	Convictions.	Executions.	
1871	9	3	2	......	2
1872	14	3	5	......	4
1873	9	4	1	......	3
1874	7	2	7	1	10
1875	7	1	1	1	4
1876	12	4	3	......	3
1877	4	2	5	......	......
1878	8	1	4	......	3
1879	16	......	5	1	3
1880	15	4	6	......	......
1881	3	1	3	1	6
1882	10	3	4	......	3
1883	8	1	1	......	3
1884	7	2	1	......	......
1885	9	3	2	......	......
1886	10	2	12	......	9
1887	3	......	1	4*	......
1888	15	2	2	......	......
1889	3	3	1	......	......
1890	2	1	1	......	1
1891	5	3	1	......	......
1892	6	1	1	......	......
1893	7	5	2	......	......
1894	6	5	1	......	... ..
1895	5	1	2	......	......

* Mount Rennie case ; convicted in 1886.

The last execution for rape took place shortly after the close of the year 1886, when four youths were hanged. Since then, as shown by the table just given, there have been only twelve capital convictions for rape and for an attempt to commit rape. It would be rash to argue that the executions in 1887 have exercised a salutary effect upon persons disposed to commit this crime, for there has been no diminution in the number of persons committed for trial. With more reason it might be assumed that juries are loth to convict for rape, knowing that death is the penalty assigned by law as its punishment.

COST OF POLICE AND PRISON SERVICES.

The following table shows the amount expended in maintaining the police and prison services during the last five years, and also the amount of fines paid into the Consolidated Revenue, and the net return from prison labour:—

Expenditure and Revenue.	1891.	1892.	1893.	1894.	1895.
Expenditure—	£	£	£	£	£
Police	308,887	323,249	319,626	324,171	333,110*
Penal establishment	147,572	156,776	155,173	132,064	134,292
Total	456,459	480,025	474,799	456,235	467,402
Revenue—					
Fines	17,042	15,805	13,981	11,460	12,443
Net return from prison labour	24,602	23,400	22,941	22,469	21,817
Total	41,644	39,205	36,922	33,929	34,260
Net Expenditure	414,815	440,820	437,877	422,306	433,142
	s. d.	s. d.	s. d.	s. d.	s. d.
Per Inhabitant	7 3	7 6	7 3	6 10	6 10

* Financial year, 1895-6.

Since the previous edition of this work, the amounts set down in the above table as the value of prison labour have been reduced, as it was found that, in addition to the value of the labour employed in producing articles for outside disposal or for use in the Government service, or employed in the construction or improvement of prison buildings, and, therefore, possessing a monetary value to the State, it had been the practice to set down a certain sum for unproductive services. As they are now presented, the figures only represent the labour of a productive character.

EXTRADITION.

There are two Imperial statutes in force in New South Wales for the surrender of fugitive criminals, viz., the Extradition Act of 1870, and the Fugitive Offenders Act of 1881. The former provides for the surrender to foreign States of persons accused or convicted of certain crimes within the jurisdiction of such States, and for the trial of criminals surrendered to British dominions. Treaties for the extradition of fugitive criminals exist between Her Majesty's Government and the Governments of France, Germany, Austria-Hungary, Brazil, Spain, Italy, Belgium, the Netherlands, Denmark, Sweden and Norway, Switzerland, Hayti, the United States of America, the Argentine

Republic, Columbia, Ecuador, Guatemala, Mexico, Orange Free State, Portugal, Roumania, Russia, Salvador, Tonga, and Uruguay. In proceedings taken in New South Wales under this Act the fugitive is brought before the Governor, who hears evidence on oath, and, if satisfied that the person is liable to be extradited, makes out a warrant to that effect. At the hearing of the case, the Consul for the country to which the person charged belongs, the Crown Solicitor, and the Inspector-General of Police are present. If a warrant is made out, the prisoner is sent to Darlinghurst Gaol for fifteen days prior to extradition, during which interval he may apply to the Supreme Court for a writ of *habeas corpus*. During the ten years ended 1895 there were altogether 31 persons extradited, all of whom were escapees from the French penal settlement of New Caledonia.

Under the Fugitive Offenders Act, 1881, provision is made for the surrender from the United Kingdom to a British possession or *vice versa*, or from one British possession to another, of fugitives charged with the perpetration of crimes which are, in the part of Her Majesty's dominions where they are committed, punishable by imprisonment with hard labour for twelve months or more, or by some greater penalty. Persons apprehended under the Act are dealt with at a Magistrate's Court, and their cases are included in the figures relating to the business transacted at Magistrates' Courts, and not in the returns relating to the Extradition Court.

Decrease in Crime.

There are two ways available for testing the increase or decrease in crime: the first, which is by comparing the number of arrests with the whole population of the country, may be said to be a test of the willingness or otherwise of the people to obey the laws; the second is a comparison of the persons committed for trial by jury with the whole population, and as all serious offenders are so tried, this may be looked upon as a test of the prevalence of serious crime. In making comparisons of this kind it must be borne in mind—first, in regard to apprehensions, that as new laws are continually being made, and the large proportion of such laws attach the penalty of fine or imprisonment to their breach, the number of offences for which a person is liable to be apprehended has constantly been increasing; and second, that the general tendency of late years has been for magistrates to deal summarily with a large proportion of the cases submitted to them. Hence it is quite possible that crime might be neither increasing nor diminishing, and yet the returns show an increase of apprehensions and a decrease of committals. Taking all things into consideration, the tables given hereunder may be accepted as showing that crime has largely decreased. The first table shows, in quinquennial periods, the mean population, the average number of apprehensions, and the proportion of these to the general population for the last twenty-six years :—

Period.	Mean Population.	Apprehensions.	
		Average Annual.	Per 100,000 of Population
1870-74	526,733	19,422	3,687
1875-79	633,255	28,837	4,554
1880-84	802,712	41,262	5,140
1885-89	1,000,744	39,406	3,938
1890-94	1,174,963	37,854	3,222
1895	1,264,660	36,939	2,920

NOTE.—This table has been amended since last issue.

It cannot be claimed that 2,920 apprehensions per 100,000 of population is a low average; on the contrary, it is much above that of most of the other colonies of the group, but it is a marked improvement on the rates of previous years. The comparison made above has reference to the whole population, but as few persons under 15 years of age commit crimes, children under that age have been excluded from the following statement, which compares the four years 1879–82 with the four years 1889–92, these periods being selected on account of the number in each age-group being accurately determinable from the Census taken about the middle of each period. The following figures relate to males :—

Age-group.	1879-82.			1889-92.		
	Population.	Average Annual Arrests.	Per 100,000 of Population.	Population.	Average Annual Arrests.	Per 100,000 of Population.
15 years and under 20...	38,169	1,734	4,543	54,267	1,882	3,468
20 ,, ,, 30...	75,106	8,884	11,829	117,858	9,939	8,433
30 ,, ,, 40...	56,699	8,141	14,358	92,495	8,848	9,565
40 ,, ,, 50...	43,668	5,945	13,614	58,500	5,803	9,920
50 ,, upwards...	44,602	5,061	11,347	68,970	5,045	7,315

NOTE.—The figures in this table have been amended since last issue.

In every age-group there has been a decided fall in the proportion of arrests, but the improvement is most marked in the higher age-groups, which every year are becoming more largely composed of Australian-born. The decline in the proportion of females arrested is even more noticeable than amongst the males. The following figures relating to females are on the same basis as those in the preceding table :—

Age-group.	1879–82.			1889–92.		
	Population.	Average Annual Arrests.	Per 100,000 of Population.	Population.	Average Annual Arrests.	Per 100,000 of Population.
15 years and under 20...	37,565	484	1,288	54,476	463	850
20 ,, ,, 30...	59,969	1,813	3,023	100,391	1,814	1,807
30 ,, ,, 40...	40,345	2,018	5,002	63,993	1,600	2,500
40 ,, ,, 50...	27,189	1,471	5,410	40,895	1,035	2,531
50 ,, upwards...	27,120	1,118	4,122	45,201	740	1,637

NOTE.—The figures in this table have been amended since last issue.

Turning to the committals to the higher Courts and the convictions there, an even more decided decline is noticeable, and as the committals represent the more serious types of offences, the decline must be looked upon as especially satisfactory :—

Period.	Committals.		Convictions.	
	Annual Average.	Per 100,000 of Population.	Annual Average.	Per 100,000 of Population.
1870–74	1,134	215·3	644	122·3
1875–79	1,506	237·8	881	139·1
1880–84	1,693	210·9	1,044	130·1
1885–89	1,539	153·9	885	88·4
1890–94	1,479	125·9	916	78·0
1895	1,340	106·0	871	68·9

NOTE.—The figures in this table have been amended since last issue.

It will be seen that the fall has been nearly continuous over the whole period, convictions for serious offences being scarcely so numerous as they were twenty years ago, notwithstanding the fact that population has nearly doubled during the interval.

It may be taken, then, as clearly proved that there has been a great declension in crime during the last twenty years. The reform, if it may be so termed, has come about owing to a general improvement in the community itself, and not to the reform of individuals by reason of the deterrent effect of punishments inflicted. It is in vain to look for the reformation of persons who have lapsed into crime; the prison statistics nowhere show that punishment as now administered has in general any such effect. Reference has already been made to persons with previous convictions, but, as explained, the convictions referred to are convictions within the year. If all convictions be included, it would seem that about 72 per cent. were persons who entered prison during 1895 for the first time or whose history was unknown. Of these, a large number, probably not far short of 40 per cent., find their way again into prison, not deterred by their former experience, or driven to crime by the loss of caste which a criminal conviction inevitably involves. Of the persons convicted for the second time, 52 per cent. will find their way to gaol for the third time, and of the thrice convicted about 60 per cent. will be again received into gaol.

CRIME IN AUSTRALASIA.

The convictions in the higher Courts of New South Wales, taken over a series of years, greatly exceed in number those of any other colony, and in proportion to the population they are only exceeded by Western Australia. So marked is this fact that much speculation has been indulged in as to the probable cause of the anomaly. It is admitted that the people of all the colonies are practically derived from the same stock, while their occupations and habits of life are fairly alike, and a theory has been hazarded that the high rate of crime in New South Wales is due to a blood taint derived from the original bond-population of this colony. Such a theory is manifestly absurd, as Tasmania, the province which received proportionately the largest number of convicts, and the population of which has been least diluted by immigration, has for many years had the most favourable record of convictions. There is no evidence that such a population now exists anywhere in Australasia; it certainly does not exist in New South Wales. But though the gratuitous theory above alluded to may be easily disposed of, the fact remains that the second largest proportion of convictions in the higher courts occurs in this colony. Western Australia usually, although not in 1895, shows a much higher proportion; but its sparse population and peculiar situation would warrant the anticipation of a large amount of crime of a kind not found in the older settled provinces. The convictions after trial in the Superior Courts of Australasia, for the year 1895, were as follow:—

Colony.	Convictions in Superior Courts.	
	Number.	Per 100,000 of Population.
New South Wales	871	69
Victoria	403	34
Queensland	245	54
South Australia	100	28
Western Australia	59	64
Tasmania	32	20
New Zealand	344	50
Australasia	2,054	49

In the foregoing table it will be observed that New South Wales has the largest proportion of convictions of any of the colonies, except Western Australia, the peculiar circumstances of which have already been alluded to. It has already been pointed out, in explaining the changes in the compilation of the criminal statistics, that the high rate of offenders in New South Wales is due to a number of causes. First among these, as accounting for the excessive number of convictions in the Superior Courts, may be mentioned the differences in the jurisdiction of the Courts of the various colonies. For instance, South Australia and Tasmania have no intermediate Courts like the Quarter Sessions of New South Wales and the District Courts with criminal jurisdiction of some of the other colonies, and many persons who would be committed to higher Courts in New South Wales are convicted in the Magisterial Courts of South Australia and Tasmania. Further, in Victoria magistrates have a much wider jurisdiction than in New South Wales, and many offenders who are summarily convicted in the former colony would have to be committed to a higher tribunal in the latter province. It will be seen, therefore, that this question of the jurisdiction of the magistracy of the colonies is one which must affect the criminal returns of the Superior Courts.

Another point which must be considered is the large number of persons who drift from one part of the country to another in search of work. For many years there has been in New South Wales a large population whose abode in any district is determined by the existence of a demand for unskilled labour, and it is from the ranks of this floating population that a large proportion of the persons convicted of crime is derived. All the colonies have, to a greater or less extent, this class of population; but in New South Wales it is numerically the largest. As these people settle down to regular employment in a fixed abode and acquire interests apart from the excitements of an unsettled life, crime will be found to diminish. The neighbouring colony of Victoria, where the decrease of convictions has steadily kept pace with the settlement of its population, may be cited as an example of this truth, the proportion of convictions in 1895 being 34 per 100,000, as compared with 101 in 1866.

The laws relating to crime are somewhat similar throughout Australasia, although there are one or two important points of difference, such as the provision of the Crimes Act of 1890, under which Justices in Victoria may, under certain circumstances, discharge a person accused of simple larceny without proceeding to a conviction, which might be found on investigation to considerably affect the returns. It is possible, too, that the administration of these laws may be more rigorous in New South Wales than in any of the other provinces. This has already been shown to be the case in regard to drunkenness, and offers an additional explanation of the large number of convictions obtained in New South Wales. It should also be remembered that in this colony there is no Act to prevent the influx of criminals, such as exists and is stringently enforced in some of the other provinces.

THE SUPREME COURT—CIVIL JURISDICTION.

The chief legal tribunal of the colony is the Supreme Court, which is at present composed of seven Judges, viz., a Chief Justice and six Puisne Judges. Civil actions are usually tried by a jury of four persons, but either party to the suit, on cause shown, may apply to a Judge in Chambers to have the cause tried by a jury of twelve. Twice the number of jurors required to sit on the case are chosen by lot, from a panel summoned by the Sheriff, and from that number each of the parties strikes out a fourth, the remainder thus selected by both parties forming the jury who are to try the case. The jury are constituted the judges of the facts of the case only, being bound to accept the dicta of the Judge on all points of law. From the Court thus constituted an appeal lies to what is called the "Full Court," sitting *in Banco*, which is generally composed of at least three of the Judges. The Chief Justice, or in his absence the senior Puisne Judge, presides over the Full Court, which gives its decision by majority. The circumstances under which new trials are granted are:—Where the Judge has erroneously admitted or rejected material evidence; where he has wrongly directed the jury on a point of law; where the verdict of the jury is clearly against evidence; or where, from some other cause, there has evidently been a miscarriage of justice.

Provision is made for appeals to the Privy Council, but any suitor wishing to carry his cause before the supreme tribunal of the Empire must first obtain leave so to do from the Supreme Court. The amount in dispute must be at least £500, or affect the construction of a New South Wales statute. In other cases application for leave to appeal must be made to the Privy Council itself. The British Government has been considering the advisability of appointing an Australian Judge to a seat on the Judicial Committee of the Privy Council, so that he might bring to the deliberations of the Committee his knowledge of the laws, especially the land laws, of the colonies. So far as New South Wales is concerned, there have been, during the ten years ended 1895, 43 appeals to the Privy Council in common law, 2 in Equity, 2 in Bankruptcy, and 1 from the judgment of the Vice-Admiralty Court; of which, 4 appeals in common law and 2 in Equity were made during last year. Only two of these appeals were in cases directly arising out of the Crown Lands Acts; but in a number of other cases questions of interpretation of the land laws of the colony have arisen when the appeals were being considered by the Privy Council.

The Chief Justice has also an extensive jurisdiction as Commissary of the Vice-Admiralty Court, in which all cases arising out of collisions, etc., in Australian waters, are determined. One of the Puisne Judges acts as his deputy, but the Supreme Court, as such, has no jurisdiction in Admiralty cases.

One of the Puisne Judges also acts as Judge of the Equity Court, from whose decrees an appeal lies to the Full Court, and thence to the Privy Council.

Affairs in Bankruptcy are also dealt with by a Puisne Judge, assisted by the Registrar. An appeal can be made to the Full Court against the Judge's decision.

Another Puisne Judge presides over the Divorce Court, in which cases are usually tried without a jury, an appeal lying to the Supreme Court.

The Equity Judge formerly represented the ecclesiastical jurisdiction of the Supreme Court, and heard and decided all applications for the probate of wills and for letters of administration, and also determined suits as to the validity, etc., of wills. By the Probate Act of 1890 this jurisdiction was vested in the Supreme Court in its Probate jurisdiction, and the business transferred to such Judge as might be appointed Probate Judge. Motions for rehearing cases, adjudicated in this Court, are sometimes made before the Supreme Court or Privy Council.

A Judge can only be removed from office upon the address of both Houses of Legislature. Upon permanent disability or infirmity, or after fifteen years' service, a Judge is entitled to retire from the Bench with a pension, the amount of which, as well as of his salary, is secured and regulated by various Acts.

A person eligible for admission as a solicitor, provided he has not been admitted in Great Britain or Ireland, or in any of the other Australasian Colonies, must have been articled to some solicitor practising in New South Wales, and have served for a term of five years, or in the case of a person who has taken a degree in Arts before entering into articles, a term of three years, and must have passed the examinations of a Board, consisting of two barristers and four solicitors, appointed annually for that purpose by the Supreme Court. The admission of a solicitor can only take place on the last day of any of the four terms into which the judicial year is divided. A solicitor who ceases to practise for twelve months continuously may be struck off the roll, in which case it is necessary for him to give a term's notice before he can be readmitted. A barrister who has been in practice as such for five years, having caused himself to be disbarred, can, [illegible] Act 55 Vic. No. 31, be admitted as a solicitor without exam
Under the provisions of the same Act a solicitor is competent
and has the right of audience, in all courts of New South W
Court can suspend or remove from the roll of solicitors any pe
in its opinion, has been guilty of misconduc [illegible] ctice.

The Board for approval of qualified pers
of the Supreme Court of New South Wal
No. 57, and consists of the Judges of the
General for the time being, and two electe
cants must have been students-at-law for th

for two years, and have passed all examinations prescribed by the Board. A solicitor who has been in practice for not less than five years, and who has removed his name from the roll of solicitors, is entitled, under Act 55 Vic. No. 31, to be admitted as a barrister without examination. Admission is made in open Court any day in term by any two Judges sitting together.

During the year 1896 there were 144 persons practising as barristers of the Supreme Court, while the solicitors numbered 822, of whom 469 were in the metropolitan district, and 353 in various country towns.

COMMON LAW JURISDICTION OF SUPREME COURT.

The following table gives the number of writs issued and the amount for which judgment was signed in the Supreme and Circuit Courts (Common Law jurisdiction) during the last six years. The number of writs issued includes cases which were subsequently settled by the parties; but the total amount involved in these claims is not, of course, included in the sum for which judgment was signed. The figures given include taxed costs :—

Year.	Writs issued.	Judgment signed.
	No.	£
1890	5,951	751,825
1891	6,144	537,231
1892	6,219	739,419
1893	6,205	724,211
1894	4,866	489,054
1895	4,118	478,225

The number of causes set down and tried is shown below :—

Year.	Causes set down.	Not proceeded with.	Referred to Arbitration.	Causes Tried.				
				[illegible]	Verdict for Defendant.	Disagreement of Jury.	Non-suited.	Total.
	[illegible]	[illegible]	No.	[illegible]	No.	No.	No.	No.
1890	[illegible]	[illegible]	......	[illegible]	[illegible]	3	[illegible]	222
1891	[illegible]	[illegible]	......	[illegible]	[illegible]	1	[illegible]	276
1892	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	266
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	......	[illegible]	266
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	296
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	245

EQUITY JURISDICTION.

The practice and procedure of the Supreme Court in its equity jurisdiction are regulated by the Equity Act, 1880, and subsequent amending Acts. The transactions of the Equity Court during the last six years were as follow :—

Year.	Statements of Claims.	Statements of Defence.	Petitions.	Summonses.	Motions.	Decrees and Orders.
	No.	No.	No.	No.	No.	No.
1890	224	115	136	....	....	644
1891	212	135	137	....	....	712
1892	246	103	143	....	....	829
1893	240	115	139	....	....	835
1894	221	144	112	148	131	899
1895	222	126	128	253	201	895

PROBATE JURISDICTION.

The number of probates and letters of administration granted by the Supreme Court in its testamentary jurisdiction is shown in the following table for the last ten years :—

Year.	Probates and Administrations—Wills annexed.		Letters of Administration.		Total.	
	Number.	Amount sworn to.	Number.	Amount sworn to.	No. of Estates.	Amount sworn to.
		£		£		£
1886	1,026	4,726,918	706	768,628	1,732	5,495,546
1887	961	3,621,874	665	641,426	1,626	4,263,300
1888	998	3,652,963	667	638,295	1,665	4,291,258
1889	1,115	4,317,734	682	473,611	1,797	4,791,345
1890	1,131	6,605,545	680	922,577	1,811	7,578,122
1891	1,192	4,734,228	767	722,568	1,959	5,456,796
1892	1,287	4,619,164	842	1,150,163	2,129	5,769,327
1893	1,183	3,508,264	782	635,537	1,965	4,143,801
1894	1,372	4,370,217	791	928,567	2,163	5,298,784
1895	1,321	4,185,497	833	672,729	2,154	4,858,226

The figures here shown and those dealt with in the chapter on Private Finance as given by the Stamp Duties Department do [illegible] Court gives the gross values of estates, i[illegible] of such [illegible] investigation, are found not to be s[illegible] duty, [illegible] Duties Department returns the net v[illegible] those not subject to duty. The retur[illegible] to some extent by probates taken out [illegible]

INTESTATE ESTATES.

An officer is appointed by the Supreme Court, under Act 54 Vic. No. 25, as Curator of Intestate Estates. He is empowered to apply for an order to collect the estate of any person who has died intestate, and left real or personal property, and no widow or next of kin resident within the jurisdiction of the Court; or of a person who has died intestate and left no executor, or no executor capable of acting in execution of his will and willing to do so; and in a few other instances. After meeting all proved and allowed claims, the Curator pays the balance of the amount realised into the Colonial Treasurer's Curator of Intestate Estates Account. Moneys not claimed within six years are paid into the Consolidated Revenue Fund, and used for the public service of the colony. A rightful claimant may afterwards, however, obtain payment thereof, but without interest from the date of payment into the Treasury. Moneys belonging to minors are paid under order of the Court, and invested in the Savings Bank of New South Wales on behalf of the children until they reach the age of 21.

The number of estates opened during 1895 was 422, from which the Curator received £24,044, and paid away £5,928; while in connection with estates opened during previous years £21,111 was received, and £44,376 paid away. Commission and fees to the amount of £2,133 were paid into the Consolidated Revenue during the year. The Revenue also benefited to the extent of £12,556 of unclaimed moneys, while claims amounting to £216 were received for moneys which had been paid into the Consolidated Revenue.

BANKRUPTCY JURISDICTION.

The Bankruptcy law is administered by a Judge in Bankruptcy, under 51 Vic. No. 19 and amending Acts. Certain of the powers vested in the Judge are, however, delegated to a Registrar in Bankruptcy, and in the country districts many Police Magistrates and Registrars of District Courts are appointed as District Registrars in Bankruptcy, and have the same powers and jurisdiction as the Registrar in respect to the examination of bankrupts, the issue of summonses, etc. Appeals from decisions of the Registrar or a District Registrar are made to the Judge in Bankruptcy, who also deals with questions relating to priority of claims. When any person becomes embarrassed, or is unable to pay his debts, the law allows him to sequestrate his estate for the benefit of his creditors, or the latter may, under certain specified conditions, apply for a compulsory sequestration. An officer of the Court, termed an official assignee, is deputed by the Judge to manage the sequestrated estate. He receives 2½ per cent. commission on the amount realised and 2½ per cent. on the amount of dividends declared. In some cases the Judge may also award him special remuneration. Creditors have the power to accept, and the Judge to approve, proposals for a composition, or for an arrangement, provided that the scheme has been approved by a majority representing three-fourths of the value of all proved claims. If such a proposal has been accepted, one or two trustees may be appointed in place of, or in addition to, the official assignee. After the acceptance and approval of a composition or a scheme of arrangement, a bankrupt may have his estate released from sequestration. He is also entitled to a release when all the creditors have been paid in full, or when they have given him a legal quittance of the debts due to them. In other cases a bankrupt may give notice by advertisement three months from the date of sequestration of his intention to apply for a certificate of discharge. The application is heard within thirty days of the date of the first publication of the advertisement. The Judge receives a report from the official assignee, and may either grant or refuse an absolute order of discharge, or suspend the operation of the order for a certain time, or grant an order subject to conditions respecting the future earnings or income of the bankrupt.

Statistics of the transactions of the Bankruptcy Court will be found in the chapter of this work dealing with Private Finance. The matter of most interest from a legal point of view is the expenditure incurred in realizing estates. On an average, costs seem to absorb 40·35 per cent. of the unsecured assets.

DIVORCE AND MATRIMONIAL CAUSES JURISDICTION.

Prior to the passing of the Matrimonial Causes Act of 1873 (36 Vic. No. 9) the Supreme Court of New South Wales had no jurisdiction in divorce. Under that Act the chief grounds for divorce were adultery since marriage on the part of the wife, and adultery and cruelty on the part of the husband. The present Act was assented to on the 9th May, 1892, but did not come into force, owing to an informality, till the 6th August. During 1893 an amending Act (56 Vic. No. 36) was passed. Under these Acts petitions for divorce can be granted for the following causes, in addition to those already mentioned:—*Husband v. Wife.*—Desertion for not less than three years; habitual drunkenness for a similar period; being imprisoned under sentence for three years or upwards; attempt to murder or inflict grievous bodily harm, or repeated assault on the husband within a year preceding the date of the filing of the petition. *Wife v. Husband.*—Adultery, provided that at the time of the institution of the suit the husband is domiciled in New South Wales; desertion for not less than three years; habitual drunkenness for a similar period; being imprisoned for three years or upwards, or having within five years undergone various sentences amounting in all to not less than three years; attempt to murder or assault with intent to inflict grievous bodily harm, or repeated assault within one year previously. To entitle either party to seek relief on any of these grounds he or she must have been domiciled in the colony for three years or upwards at the time of instituting the suit, and must not have resorted to the colony for the purpose of having the marriage dissolved.

In addition to the principal causes for which a divorce may be obtained, judicial separation may be granted for desertion extending over two years. Petitions of nullity of marriage may be granted in cases in which the ceremony is rendered void by the law of the land, or in which some statutory requirements have not been observed, or in which one of the parties is incapable of performing the duties of marriage. The law also provides for suits for the restitution of conjugal rights. Before such a suit can be brought there must have been a request of a conciliatory character to the other party to return to cohabitation.

Further particulars relating to divorce will be found in the chapter dealing with Vital Statistics.

DISTRICT COURTS.

District Courts have been established for the trial of civil causes where the sum in dispute does not exceed £200. They are presided over by Judges who are specially appointed for the purpose, and who also perform the duties of Chairmen of Quarter Sessions, in which capacity they are competent to try all prisoners except such as are charged with capital crimes. District Courts sit during ten months of the year in the metropolis, and they are held twice a year in all considerable country towns. The Judge is not ordinarily assisted by a jury, but in cases where the amount in dispute exceeds £20, either of the parties may, by giving notice to the Registrar of the Court, have a jury summoned. On questions of law, and in respect to the admission or rejection of evidence, an appeal lies to the Supreme Court.

The number of suits brought in the District Courts of the colony, and the mode in which they were tried, are given in the following table for the judicial year terminating at the end of February, 1896 :—

District.	Summonses.						Causes tried.		Costs of the Suits.
							Verdict for—		
	Causes tried.	Causes settled without hearing and not proceeded with.	Causes referred by parties to arbitration.	Causes left in arrear.	Total summonses issued.	Total amount sued for.	Plaintiff.	Defendant.	
	No.	No.	No.	No.	No.	£	No.	No.	£
Metropolitan and Hunter	2,892	2,316	5	84	5,297	107,684	2,684	208	8,987
Southern	424	307	1	21	753	21,270	375	49	1,245
South-western	260	230	...	37	527	20,877	229	31	1,664
Western	353	217	...	25	595	19,902	297	56	1,231
Northern	626	397	3	25	1,051	30,041	575	51	1,714
North-western	211	107	...	29	347	14,646	183	28	1,163
Total	4,766	3,574	9	221	8,570	214,420	4,343	423	16,004

Of the 4,766 causes heard durin [illegible] 52 were tried by jury. During the same period th [illegible] om judgments given in

District Courts. In 17 of these cases the judgment was upheld, and in 6 cases it was reversed. There were also 8 motions for new trials, 5 of which were granted, and 3 refused.

MAGISTRATES' COURTS.—SMALL DEBTS CASES.

Magistrates' Courts in the metropolitan district can adjudicate upon cases where the amount in dispute does not exceed £10, and in the country districts upon cases involving an amount not exceeding £30. The total number of small debt cases brought before Magistrates' Courts during 1895 was 31,775, of which 11,964 were heard in the metropolitan courts, and 19,811 in the country courts. Of the metropolitan cases, there were 9,747 in which the amount involved was under £5, and 2,217 in which it was between £5 and £10. Of the cases tried in the country, there were 12,485 in which the amount was under £5; 4,509 in which it was between £5 and £10; and 2,817 in which it was between £10 and £30.

LICENSING COURTS.

In the metropolitan district of the colony the Licensing Court for the sale of intoxicants consists of the Stipendiary Magistrates, with the addition of a Justice of the Peace especially appointed for the purpose, bringing the number of occupants of the Bench up to seven, three of whom form a quorum; while in the country districts the local Police Magistrate and two Justices of the Peace, also specially appointed, constitute the Court. There has been an absolute decrease in the number of licensed public-houses in the metropolitan district since 1881, attributable to the operations of the Licensing Act, which came into force in that year. In the succeeding year the number of licensed houses in the metropolitan area was 940, and in the country districts, 2,123; thirteen years later the numbers were 793 and 2,445 respectively—a decrease equal to 15·6 per cent. in the metropolis, and an increase in the country districts of 15·2 per cent. The following table gives particulars respecting the number of public-houses, and the average number of residents to each:—

Year.	Number of Licensed Houses.			Average number of Residents in District to each House.		
	Metropolitan	Extra-Metropolitan.	Colony.	Metropolitan	Extra-Metropolitan	Colony.
1888	858	2,510	3,368	389	379	308
1889	856	2,549	3,405	411	280	313
1890	853	2,575	3,428	434	284	321
1891	847	2,594	3,441	471	295	339
1892	834	2,607	3,441	994	301	348
1893	812	2,558	3,370	513	310	359
1894	795	2,495	3,290	531	327	370
1895	793	2,445	3,238	525	347	391

The following table, giving the number of licenses current during each of the last five years for the sale of the wines of the colony, will be found interesting:—

Year.	Metropolis.	Country.	Total.
1891	192	298	490
1892	215	291	506
1893	241	270	511
1894	233	267	500
1895	271	273	544

PATENTS.

The law relating to the registration of inventions and improvements has been in force since 1853, but it is only within recent years that the provisions of the Act have been availed of to any great extent. In 1879 and 1887 the law was amended and the fees reduced to the nominal sum of £5 for complete Letters Patent, and £2 for a Certificate of Provisional Protection, which latter may, if application be made within twelve months from its granting, be converted into a patent on the payment of an additional £3. The result has been that the business of the Patent Office has greatly increased. The inventions registered in 1895 were for the most part not local but foreign, and this feature has marked the operations of the Patent Office since its inception. The following is the number of patents and assignments thereof for inventions or improvements registered from 1855 to 31st July, 1887, under Acts 16 Vic. No. 24 and 42 Vic. No. 27:—

Year.	Number of Registrations.		
	Patents.	Assignments.	Total.
1855–59	26	......	26
1860–69	173	27	200
1870–79	426	137	563
1880–87	1,164	189	1,363
Total to 31st July, 1887	1,789	353	2,142

The following have been granted under Act 51 Vic. No. 3 :—

Year.	Letters Patent.	Letters Patent to supersede certificates.	Certificates of Provisional Protection.	Assignments.	Licenses.
*1887	225	12	183	15	......
1888	490	75	252	58	......
1889	518	89	278	84	3
1890	494	105	274	100	2
1891	540	101	252	111	3
1892	496	82	208	105	8
1893	366	77	240	113	19
1894	410	81	310	80	44
1895	478	88	301	104	17

* From 1st August to 31st December.

The numbers of certificates of Provisional Protection and Letters Patent applied for since the amending Act became law on the 1st August, 1887, are 2,298 and 4,017 respectively, and during 1895 the totals were 301 and 478, while 104 assignments were registered during the latter period. In addition to these, 88 Letters Patent to supersede Certificates and 17 Licenses were registered in 1895. The countries from which applications for certificates of Provisional Protection and Letters Patent in New South Wales were received are as follow :—

Country.	Registered during 1895.	Total registered since the 1887 Act became law.	Country.	Registered during 1895.	Total registered since the 1887 Act became law.
Australasia—			France	12	50
New South Wales	305	2,660	New Caledonia	....	3
Victoria	187	1,259	Germany	10	77
Queensland	14	142	Hawaiian Islands	....	2
South Australia	21	217	Italy	....	1
Western Australia	3	9	Japan	....	1
Tasmania	5	23	Portugal	....	2
New Zealand	75	349	Russia	1	8
United Kingdom	106	957	Transvaal	2	6
Canada	7	32	Spain	....	1
Cape Colony	....	3	Cuba	1	1
Fiji	1	1	Sweden	....	17
India	1	2	Norway	....	1
Argentine Republic	1	2	Switzerland	1	2
Austria	1	15	United States	72	457
Belgium	2	10			
Denmark	1	5	Total	779	6,315

It will thus be seen that out of the total of 6,315 applications under the present Act, 2,660, or over 42 per cent., were made by persons residing in the colony, though not necessarily for inventions perfected in New South Wales.

COPYRIGHT.

The Copyright Act in force in this colony was passed on the 14th May, 1879, and became law on the 1st July, 1879. The Act is divided into four parts, dealing with the following subjects :—Part I. Literary, Dramatic, and Musical Works ; Part II. Fine Arts ; Part III. Designs ; Part IV. Miscellaneous Provisions.

Part I provides for the registration of copyright in books or publications, as understood in the widest sense of the term, and for every new edition containing any alterations in the matter ; and also for the registration of playright, or the right of representing or performing dramatic or musical productions, whether previously printed and published or not. In this colony copyright is registered only for works first published here, and it commences to run on first publication, representation, or performance ; but no remedy can be obtained or legal proceedings taken for anything done before registration. The term of protection is 42 years, or the life of the author plus 7 years, whichever is the longer period. Nothing blasphemous, seditious, immoral, or libellous is entitled to be registered, nor any mere advertisement. Literary works for which registration is sought must be submitted to the Registrar in a complete state as published ; but dramatic or musical works may be in manuscript, which is returned. One of the best copies issued of the first and each subsequent edition of every printed "book" published in the colony must, within two months of publication, be delivered to the Public Library of New South Wales and to the Librarian of University of Sydney. The penalty for default in delivering library copies is forfeiture of the value of the book and a sum not exceeding £10. Library copies must be delivered whether the book is registered or not. Lectures receive protection without being registered, on compliance with the requirements of the Act ; but lectures are public property if delivered in any University, Public School, or College, or on any public foundation, or by any individual by virtue of or according to any gift, endowment, or foundation. The registration fee is 5s. ; and the fee for a copy of entry, whether required by the proprietor or anyone else, is 3s.

Part II gives copyright in paintings, drawings, works of sculpture, and engravings, including the design thereof, for 14 years, and in photographs and the negatives thereof, for 3 years. The fees to be paid are :—1s. for photographs and their negatives and for chromographic cards, 5s. for other subjects, and 3s. for copies of entry. Copyright in a work of fine art which has not been executed under commission does not of necessity either follow the work or remain with the artist, but ceases to exist, unless it has been secured by agreement between the parties, signed at or before the time of the sale or disposition of the original. To entitle a work to copyright it must be new and original, and must have been executed in the colony.

Part III. Under this part of the Act protection can be obtained for new and original designs, not previously published in this colony or elsewhere, such designs being applicable to articles of manufacture or works of art, whether intended for purposes of utility, ornament, or otherwise. The protection does not extend to the article itself, but only to the design thereof; consequently, it does not apply to any mechanical action, principle, contrivance, application, or adaptation, or to the material of which the article is composed. The substances to which designs may be applied are for registration purposes divided by the Act into fourteen classes, two years' protection being assigned to some classes, and three years to others. The design must be applied within the colony. The registration fee is 10s., and registered designs must bear a registration mark. If protection is required in more classes than one, it can only be secured by simultaneous registration.

Part IV contains general provisions, and amongst other matters declares copyright to be personal property, assignable at law, and transmissible by bequest, and subject in case of intestacy to the same law of distribution as other personal property.

The Copyright Law of England is comprised chiefly in some fourteen Acts of Parliament, of an unusually obscure and conflicting character, and is extensively elaborated by judicial decisions. Under the "International Copyright Act, 1886," 49 & 50 Vic. c. 33, and the Orders in Council thereunder, the greater part of this body of law, together with the terms of the Copyright Convention of Berne, is made reciprocally applicable to Great Britain and each of her Dependencies, and to the countries that are parties to the Convention, with their colonies, namely:—Germany; Spain, with her colonies; France, with her colonies and Algeria; Great Britain, with her colonies and possessions; Belgium, Haiti, Italy, Switzerland, Luxemburg, Monaco, Montenegro, and Tunis—previous copyright treaties being for the most part abrogated.

Copyright when registered in a foreign country is covered by the local law within that country, and by the International Copyright Acts and the Convention thereunder, within the British Dominions, and *vice versa*.

Literary matter published in any part of the British Dominions may now be protected by copyright throughout the whole Empire, by registering the work in the country of origin if there is a local Registry, or at the London Office if there is not. Proprietorship in registered Colonial copyright can be asserted in any Court in the Empire by producing a copy of entry issued by the Copyright Office of the country of origin, and authenticated by the Governor or proper Minister of that country.

The registrations of copyright effected in New South Wales have been :—

	During 1895.	From the passing of the Act in 1879 to 31st December, 1895.
PART I. *Literature* :—		
Printing and publishing right—		
Books	55	550
Periodicals	8	199
Music	36	114
Playright—		
Drama	2	53
Music	1	10
Total	102	926
PART II. *Fine Arts* :—		
Painting	....	67
Drawing	5	55
Sculpture	....	8
Engraving	9	153
Photography	13	623
Total	27	906
PART III. *Designs.*—Useful, Ornamental, or otherwise	17	404
Grand Total	146	2,236

The yearly receipts from registration of copyrights do not usually reach £40. The highest sum in any year was £60 2s. in 1887, and the lowest £25 13s. in 1889. During 1895 a total sum of £50 15s. was received under the following heads :—Literature, £36 9s.; Fine Arts, £4 14s.; and Design, £9 12s.

INTERNAL COMMUNICATION.

Roads and Bridges.

FOR many years settlement in New South Wales was restricted to the narrow belt of land shut in between the Blue Mountains and the sea. Several main roads were formed through this country within a few years after the foundation of the colony. These roads connected the infant towns of Parramatta, Liverpool, Windsor, and Penrith with the metropolis, and were constructed entirely by bond labour. The abrupt wall of sandstone rising on the farther side of the Nepean barred all access to the interior of the country. As early as the year 1796 George Bass made an attempt to cross the mountain range, but returned after an unsucessful journey, reporting that it was impossible to find a passage even for a person on foot. In 1813 a protracted season of drought, attended by considerable losses amongst the stock, brought home very clearly to the settlers the conviction that the future of the colony entirely depended upon the extension of grazing land beyond the narrow limits within which they were then hemmed. In the month of May of that year Mr. Gregory Blaxland, Mr. W. C. Wentworth, and Lieutenant Lawson attempted to find a passage across the mountains. After meeting with difficulties which seem astonishing enough to the present generation, who have seen a railway carried over the same track by which Bathurst may be reached in a few hours, these gentlemen succeeded in opening a way—sometimes by creeping through dense forests, at others by scaling tremendous precipices—to the vast plains lying west of the Great Cordillera of Australia. They returned on the 6th June, and shortly afterwards Governor Macquarie sent a party of surveyors, under Mr. George W. Evans, Deputy Surveyor-General, to report on the practicability of making a road. The report was favourable, and the construction of the great western highway was at once commenced, the work being performed by gangs of bond labourers. The track thus made formed a continuation of the Great Western Road from Penrith, and it was completed as far as Bathurst by the 21st January, 1815.

The discovery of the Bathurst Plains and the completion of the mountain road gave so great an impetus to settlement that it was found impossible to keep pace in the matter of roads with the demands of the settlers. The Government, therefore, contented itself with maintaining the roads already constructed, and extending them in the direction of the principal centres of settlement. For many years these main roads were the only ones which received attention. This would perhaps have been sufficient had the progress of settlement subsequent to 1850 been similar to that made during previous years. Such, however, was not the case. The gold discovery entirely altered the circumstances of the colony, and during the period of excitement and change which followed that remarkable event so many new roads were opened, and traffic increased so largely, that the general condition of the public highways was by no means good. The Roads Department was formed as far back as 1857, and although good service was done by the road pioneers before that date, the modern system of roadmaking may be said to have begun with the creation of the department. It was not, however, until 1864 that the whole of the roads, both main and subordinate, received attention at the hands of the State.

The principal main roads of the colony are:—

Northern Road—length, 405 miles, from Morpeth to Maryland, New England.

Western Road—length, 338 miles, from Sydney to Warren through Bathurst, Orange, and many other important townships; thence prolonged to the Darling, at Bourke, by a line 175 miles in length.

Southern Road—length, 385 miles, from Sydney to Albury. This road was, before the construction of the railway, the great highway between Sydney and Melbourne.

South Coast Road—length, 250 miles. This road, after leaving Campbelltown, ascends the coast range, along the top of which it runs as far as Coal Cliff. It then traverses the Illawarra district, parallel to the coast, and passes through the rich lands watered by the Shoalhaven, Clyde, and Moruya, as far as Bega, whence it extends, as a minor road, to the southern limit of the colony.

None of these roads has now the importance which it formerly possessed. The railways of the colony for the most part follow the direction of the main roads, and attract to themselves nearly all the through traffic. The tendency now is to make the roads act as feeders to the railway, by converging the traffic from outlying districts towards convenient stations along the line.

The expenditure by the Government upon the different roads is made in accordance with the recommendation of the Road Superintendent for the district, which is based upon the requirements for each road. Formerly the roads of the colony were divided into seven classes according to their importance, and the yearly expenditure ranged from £50 per mile on roads in the first class to £5 per mile on those in the seventh class.

The network of roads spreading over the face of the colony is divided, for purposes of maintenance, into road districts and road trusts. The whole colony is divided into sixty-two road districts, each of which is placed in the charge of a Superintendent, who is directly responsible to the Commissioner for Roads. The Road Superintendents have the greater part of the road communication of the colony outside the municipal boundaries, as well as a portion of the roads within municipalities, under their care. The road trusts have the supervision of the expenditure of certain grants for the maintenance of roads in districts which are chiefly of minor importance; there are, however, certain important roads in the vicinity of the metropolis governed by trusts. The length of roads in charge of Road Superintendents on the 30th June, 1896, was 36,300 miles, while about 1,756 miles were under the care of road trusts. There were also 1,104 miles within municipal areas, which were subsidised by the Department, making a total of 39,160 miles under control. Of the 36,300 miles in charge of Road Superintendents, 6,771 miles were metalled, ballasted, or gravelled; 4,881 miles were formed and drained, and all necessary culverts constructed, but were not metalled; 5,750 miles were cleared and drained; 6,705 miles were cleared only; and 12,193 miles were roads which wind their way through the forests of the interior, chiefly along the lines marked out by the cart-wheels of the foremost settlers, and form, in dry weather, adequate means of communication for the settlers, although it must be acknowledged that in seasons of rain these roads are frequently impassable. Besides the roads mentioned above, there were 1,486 miles of mountain passes. Many of these passes presented the most formidable difficulties, and their construction reflects great credit upon the engineering skill of the officer, now deceased, who for so many years designed and supervised the construction and maintenance of the roads and bridges of the colony.

Many of the earliest bridges erected in the colony were of stone, and are still existing. Those erected in the period following the extension of settlement to the interior were chiefly of timber, and have since been replaced, after a life of about twenty-five years. Nearly all the large bridges of recent date are of iron or steel, and some of them have been erected under engineering conditions almost unique, owing to the peculiarity of the river-flow in certain parts of the country. There were altogether, on the 30th June, 1896, 2,772 bridges of 20 feet span and over, comprising 7,655 spans, covering a length of 260,519 feet; while there were also 31,073 culverts under 20 feet span, 461,578 feet in length: and 14,316 causeways, of a total length of 345,785 feet. Where the traffic has not warranted the construction of bridges, or where local circumstances have rendered them inadvisable, punts or ferries have been introduced. In June, 1896, there were 10 iron punts, 88 timber punts, and 4 horse-boats. Of these punts and boats, 7 were worked by steam-gearing and wire-rope, 74 by hand-gear[illegible] wire-rope, and 2[illegible] by wire-rope without gearing. In addition [illegible] the Department had charge of one steam-[illegible] 3 iron and [illegible] boats. 11

other boats, and 9 punt-slips for the execution of repairs. On an average, 1,488 men were employed during each month of the working year, in addition to 8,388 men engaged by contractors, making a total of 9,876 men.

The use of roads as the main arteries along which traffic from the metropolis to the interior flows has been superseded by the railways; but the roads remain not only the sole means of communication throughout a large part of the interior, but as most valuable feeders to the railway system of the country. No revenue is directly derived from roads, but their indirect advantages to the country have been very great, and after the lands and the railways they form the largest item of national property. It is estimated that £17,246,000 has been expended on roads and bridges since 1857, and their present value to the State, allowing for depreciation, cannot be less than £14,000,000. Their indirect value cannot be calculated; but as an instance of the change brought about by the system of road construction, it may be mentioned that after the organization of the Roads Department on its present basis the cost of carriage of goods by road and the time of transit were reduced by more than one half, as will appear from the following statement:—

Main Roads.	Distance.	Carriage by Road, 1857.		Carriage by Road, 1864.	
		Time in transit.	Cost per ton.	Time in transit.	Cost per ton.
	miles.	days.	£ s. d.	days.	£ s. d.
Sydney to Goulburn	134	17½	12 5 0	7½	3 15 0
,, Bathurst...............	145	23½	15 10 0	11	6 10 0
Newcastle to Murrurundi........	119	21	9 0 0	8	6 10 0

The progress exhibited during these seven years is very great. Part of the improvement may without hesitation be ascribed to better roads; but the decline in the demand for teams consequent on the cessation of the gold rush was also a cause of the lessened cost of transit. The price of carriage by road has not declined since 1864, most of the traffic being through districts remote from the centres of population, where the requirements of the teamsters are costly to supply. The roads followed by the teams are those leading to the railway lines, and the loading consists for the [illegible]f station supplies, wool, and other produce. T[illegible]s vary a[illegible]he distance and the nature of the country [illegible]but [illegible] scale may be taken as typical of the ordinary charges for outward loading—that is, from the interior to the railways. Inward goods average about 1d. per mile less than those outward:—

	s.	d.	
Up to 40 miles	1	6	per ton per mile.
,, 100 ,, ...	1	0	,,
,, 200 ,, ...	0	11	,,
,, 300 ,, ...	0	10	,,

A slight consideration of these figures will be sufficient to show how greatly the business of the country has been facilitated by the construction of railways. If 100 miles be assumed as the average distance which goods are carried, the prevailing rate by teams would be 12d. per ton per mile. On the railways, as far back as 1872, the carriage was only 3·6d., and to-day it averages not more than 1·6d. It would be overstating the case against road carriage, however, if the latter figure were compared with the average price charged by teams; but a comparison in every respect perfectly fair can be made between the cost of carrying general merchandise by rail, which is only 2·46d. per ton per mile, and that of goods by teams, which, as stated above, is 12d. per ton per mile. The saving by rail carriage is, therefore, nearly 80 per cent., and if it had been possible for the whole of the railway traffic for the year 1895 to be carried by teams, the cost would have been £12,983,436 instead of the sum of £1,558,507 (exclusive of terminal charges) actually charged by the Railway Commissioners. In the portion of this chapter devoted to goods traffic on the railways, particulars are given of the gradual cheapening of this form of carriage during the past twenty years.

During the last three years the old time spectacle might frequently be seen of huge loads of goods being carried along the main roads within sight of the railway lines. The price paid to carriers was not usually disclosed, but from the nature of things it was probably less than would have been paid to the Railway Commissioners for the same service. The competition of teams with the railway for the carriage of a certain class of goods was made possible by the extreme cheapness of fodder and the low price of horses, and to the circumstance that a number of carriers could not otherwise find employment; moreover, it only lasted for a few months in each year, and did not affect the railway earnings to any appreciable extent.

The total expenditure on account of roads of all classes during the year ended 30th June, 1896, was £666,863. This sum, however, included the administrative expenses of the Department, and the expenditure on punt approaches and similar works incidental to the road traffic of the country. In the following statement is given the expenditure on account of the construction and maintenance of roads and bridges since 1857, with details since the year 1881. Taking the table as a whole, it is plain that this form of expenditure has grown at a rate very much faster than that of the general population :—

Year.	Expenditure by Roads Department.	Expenditure by Trustees.	Total.
	£	£	£
1857 to 1880	5,430,923	782,907	6,213,830
1881	484,567	23,186	507,753
1882	577,212	24,722	601,934
1883	613,847	24,938	638,785
1884	750,584	27,722	778,306
1885	800,962	24,404	825,366
1886	628,379	28,414	656,793
1887	721,994	45,433	767,427
1888	663,929	31,503	695,432
1889	632,398	31,361	663,759
1890	770,809	34,500	805,309
1891	965,688	31,990	997,678
1892	859,028	30,605	889,633
1893	676,233	30,330	706,563
*1894-5	800,620	30,034	830,654
1895-6	642,758	24,105	666,863
Total	16,019,931	1,226,154	17,246,085

* 1894 and first half of 1895.

Besides the roads maintained by the Government, there existed, at the close of the municipal year in February, 1896, 7,207 miles of roads and streets belonging to and largely maintained by the municipalities of the colony. Of these roads, 2,267 miles were regularly formed and metalled, gravelled or ballasted, and 1,341 formed; while 1,568 miles were cleared, and 2,031 miles not cleared. The value of these roads is estimated at £4,780,000; but this sum must be looked upon as an approximation only, as the information obtained from the various municipalities is not complete.

RAILWAYS.

The first attempt to introduce into New South Wales the blessing of railway communication, which has so revolutionised the commerce of the older parts of the world, was made in 1846. On the 26th August of that year a meeting was held in Sydney at which it was decided to survey a line to connect the metropolis with the city of Goulburn. Two years afterwards, on the 11th September, 1848, the Sydney Tramroad and Railway Company was formed, with a capital of £100,000, having for its object the construction of railways to Parramatta and Liverpool, with possible extensions, in course of time, to Bathurst and Goulburn. No time was lost in breaking ground, and on the 3rd July, 1850, the Hon. Mrs. Keith Stewart, daughter of the Governor, Sir Charles Fitzroy, turned the first sod of the first railway constructed in Australia. The affairs of the Sydney Tramroad and Railway Company, however, did not prosper as the promoters had expected they would do, and it was found necessary to transfer the property of the company to the Government of the colony. Meanwhile another company had been started in 1853, with the object of constructing a railway from the city of Newcastle to Maitland; but it met with no more success than the Sydney company, and shared the same fate. On the Government taking possession of the property of the defunct companies, however, the works were carried on with more vigour, and on the 26th September, 1855, the line from Sydney to Parramatta was declared open for public traffic, and the extension to Goulburn was opened on the 27th May, 1869.

The progress of railway construction during the twenty years which followed the opening of the first line was very slow, for in 1875 the length of the lines in operation had only reached 435 miles, or at the rate of 21¾ miles opened per year. Not a single mile of railway was opened during the years 1865 and 1866; but in 1867 the construction of these great commercial highways received a fresh impetus, and continued to advance yearly until 1872, when it stood still for another period of two years, during which only 5 miles of line were thrown open to traffic. During 1875, 33 miles were opened, and from the succeeding year till 1889 still greater activity prevailed, 1,748 miles being constructed during this period, or a yearly average of 125 miles; but this rate of increase received a check, and only 14 miles were opened during the three following years. There were, however, 154 miles opened during the railway year ending June, 1893; 150 miles in the succeeding year; and 30 miles in the year ended June, 1895. In the following working year no lines were opened; but on the 30th June, 1896, three light lines of the "Pioneer" class—Narrabri-Moree, 63 miles; Parkes-Condobolin, 62½ miles; and Jerilderie-Berrigan, 23 miles—were under construction; and before the end of the year the Jerilderie-Berrigan line and the Parkes-Condobolin line as far as Bogan Gates had been opened, while the Narrabri-Moree line was rapidly approaching completion. Parliament has also sanctioned the construction of lines from Tamworth to Manilla, from Nevertire to Warren, and from Berrigan to Finley, and they will shortly be taken in hand.

The progress in construction of the State railways of the colony may be traced in the statement given below. I[illegible]sary to point out that the mileage includes the Campbellto[illegible] Tramway, the Kogarah-Sans Souci Tramway, and the Yass [illegible] which are worked with the railways, and that after 1887 the [illegible] must be taken as ending on the 30th June, a change in the working year having been made in 1888 :—

Year.	Opened during the year.	Total opened.	Year.	Opened during the year.	Total opened.
	miles.	miles.		miles.	miles.
1855	16	16	1876	73	508
1856	9	25	1877	90	598
1857	17	42	1878	90	688
1858	15	57	1879	45	733
1859	nil.	57	1880	115	848
1860	13	70	1881	148	996
1861	4	74	1882	282	1,278
1862	24	98	1883	52	1,330
1863	27	125	1884	301	1,631
1864	20	145	1885	114	1,745
1865	nil.	145	1886	162	1,907
1866	nil.	145	1887	151	2,058
1867	60	205	1888	68	2,126
1868	44	249	1889	57	2,183
1869	70	319	1890	10	2,193
1870	21	340	1891	1	2,194
1871	19	359	1892	3	2,197
1872	38	397	1893	154	2,351
1873	5	402	1894	150	2,501
1874	nil.	402	1895	30	2,531
1875	33	435	1896	nil.	2,531

Of the 2,531 miles in operation on the 30th June, 1896, there were 2,368 miles of single line, 154½ miles of double line, and 8½ miles of line with four tracks. The quadrupled lines, which extend from Sydney to Flemington on the suburban line, were brought into use during the year ended June, 1892. The double lines extend from Flemington to Penrith, 26 miles; from Granville to Picton, 39½ miles; from Illawarra Line Junction to Waterfall, 23 miles; from Strathfield to Hornsby, 14 miles; from Newcastle to Maitland, 20 miles; from St. Leonards to Milson's Point, 3 miles; from Redfern to Darling Harbour, 1½ miles; from Sydenham to Belmore, 5 miles; from Teralba to Adamstown, 8 miles; while various short lengths of line make up the remaining 14½ miles.

The progress of the accommodation afforded by the State railways of the colony can be fairly gauged by comparing the number of persons to each mile of line open for traffic at different periods, and the average number of train miles run per inhabitant. Thus in 1860 there were 4,979 persons to each mile of line, but by the end of the year 1880 the work of construction had proceeded at a rate so much faster than the increase in the population that the average number of persons per mile [illegible] fallen to 882, so that the facilities afforded by the railways were [illegible] than five times as great as in the year first named; while in [illegible] average population per mile of line was reduced to 510. The increase in the average number of train miles run per inhabitant has been very rapid, rising from 0·5 miles in 1860 to 1·8 in 1870, 4·4 in 1880, and 7·4 miles in 1890. The maximum was reached in 1891, when the number of train miles run per head of the population averaged 7·5. For the three years ended 30th June, 1896, the rate was, approximately, 6 miles to each member of the community. The following statement illustrates the extension of railway facilities since 1860:—

Year.	Population to each mile of line.	Number of train miles run.	Number of train miles run per head of population.
1860	4,979	174,249	0·5
1865	2,822	483,446	1·2
1870	1,467	901,139	1·8
1875	1,366	1,472,204	2·5
1880	882	3,239,462	4·4
1885	544	6,638,399	7·2
1890	502	8,008,826	7·4
1891	521	8,410,421	7·5
1892	538	8,356,096	7·2
1893	515	7,505,310	6·3
1894	495	7,169,785	5·9
1895	501	7,594,281	6·1
1896	510	7,719,618	6·0

COMPARISON OF RAILWAY FACILITIES.

New South Wales stands in a good position among the Australasian colonies in regard to railway development, as will be seen from the following table, which shows the length of Government and of private lines open for traffic in the various colonies in the early part of 1896:—

Colony.	Lines Open.		
	Government.	Private.	Total.
	miles.	miles.	miles.
New South Wales...	2,531	85	2,616
Victoria	3,122	......	3,122
Queensland	2,386	......	2,386
South Australia	1,868	14	1,882
Western Australia...	588	572	1,160
Tasmania...............	420	55	475
New Zealand	2,014	167	2,181
Total	12,929	893	13,822

Points of comparison between the railways of a large and thinly-inhabited country such as New South Wales and those of the countries of the Old World are difficult to obtain. The following table, however, shows the average population and the average number of square miles of territory per mile of line open, in the principal countries of the world. It will be seen that New South Wales comes fairly well out of the comparison:—

Countries.	Length of Railway.	Population per Mile of Line.	Area per Mile of Line.
Australasia:—	miles.	No.	sq. miles.
New South Wales	2,616	493	119
Victoria	3,122	377	28
Queensland	2,386	196	280
South Australia	1,882	189	480
Western Australia	1,160	106	841
Tasmania	475	340	55
New Zealand	2,181	323	48
America:—			
Argentine Republic	8,619	460	136
Brazil	7,027	2,048	458
Canada	15,768	307	210
Chili	1,782	1,663	165
United States of America	179,279	349	16
Europe:—			
Austria-Hungary	17,694	2,337	14
Belgium	2,838	2,139	4
France	24,968	1,536	8
Germany	27,013	1,830	8
Great Britain and Ireland	21,174	1,789	6
Italy	9,280	3,331	11
Netherlands	1,666	2,708	8
Norway	1,060	2,001	124
Russia (exclusive of Finland)	20,698	4,333	94
Spain	7,301	2,403	27
Sweden	5,734	850	30
Switzerland	2,201	1,333	7
Asia:—			
India (inclusive of Native States)	18,782	15,298	83
Africa:—			
Cape Colony	2,441	701	92
Natal	399	1,361	47

RAILWAY SYSTEMS.

he railway system of New South Wales is divided into three distinct
s, each representing a system of its own. The southern system,
the principal line of the colony, branches at Junee, and places
district of Riverina, as far as the town of Hay in one

direction, and Berrigan in another, in direct communication with Sydney, from which they are distant 454 and 434 miles respectively. This branch is termed the south-western line. From several other points of the line branches connecting other important districts with the metropolis have been opened for traffic. From Culcairn, 30 miles from Albury, a line connects with Corowa, on the Murray. From Cootamundra a line branches off in a southerly direction to Gundagai, and another in a north-westerly direction to Temora, whilst from Murrumburrah a line has been constructed which connects Blayney on the western line with the southern and western systems of the railways of the colony. This branch line has been found of much benefit in allowing the direct shipment of stock from the pasture grounds to the Victorian markets. Nearer Sydney the important town of Goulburn will be the centre of a system of branch lines, one of which—that from Goulburn to Cooma—is already laid down, and brings the rich pastoral district of Monaro in direct communication with Sydney.

The southern main line is the most important of the railway lines in the colony, as it passes through the richest and most thickly-populated districts, and places Sydney, Melbourne, and Adelaide in direct communication. The traffic, both of passengers and of goods, on the southern system generally, is very extensive, and arrangements for the regular carriage of mails between the two great cities enable letters to be delivered in less than twenty hours. Sleeping cars are attached to these trains on the New South Wales side, and the comfort of travellers is assured by the introduction of the most modern improvements in the construction and fitting up of the railway carriages. Since the completion of the railway from Melbourne to Adelaide, a distance of 509 miles, European mails are landed at the latter port and forwarded overland to all parts of Victoria, New South Wales, and Queensland.

Another line which forms part of the southern system has been constructed, connecting the metropolis with the coastal district of Illawarra, which is rich alike in coal and in the produce of agriculture. The present terminus is at Bomaderry, on the northern bank of the Shoalhaven River, opposite to Nowra, but it is proposed to take it eventually to Jervis Bay, closely following the coast line. A proposal has also been made for the construction of a line from the port of Eden at Twofold Bay, in the south of the colony, to the township of Bega, in the centre of a rich agricultural district; but this is at present in abeyance. At Sydenham, on the Illawarra railway, a line, 5 miles in length, branches off to Belmore, and this will no doubt eventually be continued to Liverpool.

The western system of railways extends from Sydney in the direction of the Blue Mountains, of which it reaches the upper levels a little above Emu Plains by a direct line of steep gradient, which enables the locomotive to drag its heavy freight up the abrupt eastern slope of the mountains. Up to the 18th December, 1892, a zig-zag line was used to enable trains to climb this slope of the mountains; but on the date mentioned a deviation by which the zig-zag was avoided was opened for traffic. To admit of a direct line of ascent, a tunnel, 32½ chains in length, had to be constructed through part of a mountain. The line runs along the top of the range until it descends into a valley below Mount Clarence by the Lithgow zig-zag, the construction of which is a triumph of engineering skill. In its course over the mountains the line passes through magnificent scenery of a character peculiar to this part of the world, and remarkable for its rugged grandeur. Leaving the mountains, the western railway, after throwing out a branch from Wallerawang to Mudgee, enters the Bathurst Plains, and connects with the metropolis the rich agricultural lands of the Bathurst, Orange, and Wellington districts. Beyond Dubbo it enters the pastoral country, and reaches the Darling at Bourke, 503 miles from Sydney. At Orange a branch line, 97 miles in length, connects that town with Forbes. From Parkes, one of the stations on this line, an extension to Condobolin, 62½ miles distant, is in course of construction—a section of this line, Parkes to Bogan Gate, 23½ miles in length, having been opened for traffic on the 15th December, 1896. Farther west, at Nyngan, 377 miles from Sydney, a branch line has been opened, connecting the important mining district of Cobar with Sydney, and affording at the same time rapid and sure means of communication with the pastoral country of which Cobar is also the centre. It has been proposed to continue this line as far as Wilcannia, on the Darling, whence it might be extended to Broken Hill, to meet the South Australian system, but for the present this project remains in abeyance. The western railway system also includes a short line from Blacktown to the Hawkesbury, *via* the towns of Windsor and Richmond.

The northern system originally commenced at Newcastle, but a connecting line between Homebush and Waratah has been constructed, making Sydney the head of the whole of the railway systems of the colony. The Hawkesbury River has been crossed by an iron bridge, 2,896 feet long, in seven spans, the iron superstructure of which cost £327,000. This connecting line allows direct communication between Adelaide, Melbourne, Sydney, and Brisbane, a distance from end to end of 1,808 miles, and has been found of great value to those requiring quick transit, and for the carriage of postal matter. It facilitates, moreover, the active business life of the colonies, and will be of national importance should at any time strategic movements require to be made in connection with military operations.

The northern line runs *via* Newcastle and the great coal centres ugh the rich agricultural district of the Hunter Valley, to the part of the colony known as New England, passing through e largest inland towns in New South Wales, such as Mait- ountry traversed by this line north of Newcastle is ex- As the line goes farther north it passes through a rich pastoral and agricultural territory, and some important townships are reached, viz., Tamworth, Armidale, Glen Innes, and Tenterfield, and 11 miles beyond the last-mentioned township the line crosses the border at Wallangarra or Jennings, where a junction is effected with the Queensland railways.

The northern system also comprises a branch from Werris Creek to Narrabri, which is now being extended as far as Moree, in the north-west, and the Darling in the west, thus placing the Namoi and Gwydir pastoral districts in direct communication with the ports of Newcastle and Sydney. In the New England District a line has been long projected, which would connect the town of Glen Innes with that of Inverell on one side, and with the city of Grafton, on the Clarence, on the other; an alternative line has been surveyed to connect the Clarence and New England districts, the proposed junction on the Northern line being at Llangothlin, but both this route and the one proposed from Glen Innes to Grafton present physical difficulties of such a magnitude that it is doubtful if either line will be carried out, at all events for some time to come. A portion of the North Coast railway, 64 miles in length, from the Tweed River to Lismore, on the Richmond, was opened for traffic in 1894. Bills were passed in 1896 for the construction of three new lines, viz., from Tamworth to Manilla, from Nevertire to Warren, and from Berrigan to Finley.

A short line was constructed in 1890, branching off the main northern line at Hornsby, 21 miles from Sydney, to Pearce's Corner, on the heights of St. Leonards, and this line was afterwards extended from the latter place to the north shore of Port Jackson, at Milson's Point. Proposals have been made from time to time to bridge the harbour, or to tunnel beneath it, and thus allow direct communication by rail between the suburbs on the north and the city on the south shore. In 1896 various proposals were submitted to a Parliamentary Committee, who reported in favour of a tunnel.

GRADIENTS.

The railways of the colony have been constructed with a large proportion of steep gradients, but much has been done during the last few years to reduce some of the heaviest of these. The Railway Commissioners, in one of their Annual Reports, drew a comparison between the New South Wales lines and the Alpine railways, and it was found that the gradients were steeper, and the curves sharper, on the lines of this colony than on the Alpine lines. By reducing some of the gradients, and introducing locomotives of greater power than were formerly employed, considerable economy in working, as well as the expediting of traffic, has been effected. The traffic is now carried on more satisfactorily, and the expense of extensive duplication works, which would have been necessary under the system which previously existed, has been postponed for years. However, a great deal remains to be accomplished in the matter of reducing gradients, as will be seen on reference to the following table, which shows the number of miles on different gradients at the close of 1896. The distances given include the increased length of lines for deviations, and are therefore in excess of the time-table distances.

Gradients.	Southern System.	Western System.	Northern System.	Total.
1 in	mls. chs.	mls. chs.	mls. chs.	mls. chs.
18 to 30	5 9	1 63	....	6 72
31 „ 40	62 13½	75 68	36 57	174 58½
41 „ 50	61 70	52 17	72 13	186 20
51 „ 60	40 57	55 19	45 23	141 19
61 „ 70	43 13½	43 63¼	26 61	113 57¾
71 „ 80	58 28	50 23½	39 44	148 15½
81 „ 90	30 23	32 69	18 10	81 22
91 „ 100	46 32	64 38½	45 36	156 26½
101 „ 150	103 63	101 39	79 79½	285 21½
151 „ 200	58 68½	50 77½	46 67½	156 53½
201 „ 250	31 57	16 45	19 65	68 7
251 „ 300	41 48	29 4	29 56	100 28
301 „ level	536 50	258 60¾	266 11	1,061 41¾
Total.........	1,120 52½	833 27½	726 43	2,680 43

COST OF CONSTRUCTION.

The following table shows the cost of construction of the various branches of the railway system of the colony at the middle of the year 1896. The average cost for the whole of the lines is calculated to [illegible]3,475 per mile, including all charges except those for rolling-stock, [illegible], and workshop[illegible] figure which, considering the character of [illegible] of the count[illegible]gh which the lines have been carried, [illegible] labour, [illegible] considerably greater in Australia than [illegible]ntries, [illegible] means a high one. In considering in [illegible]ng to note the comparative low cost per mile of some of the extensions through pastoral country. The line from Nyngan to Cobar averaged £3,708 per mile; that from Molong to Forbes, £5,294; from Junee to Hay, £5,681; from Werris Creek to Narrabri, £5,869; and from Dubbo to Bourke, £5,964. The line from Cootamundra to Temora was also cheaply constructed, the average cost per mile being £4,303. In connection with the Culcairn-Corowa line, which averaged £4,440 per mile, the betterment system was brought into operation. The Campbelltown to Camden, the Kogarah to Sans Souci, and the Yass lines were constructed cheaply for tram-lines:—

Lines opened for Traffic.	Length.		Total Cost.	Cost per Mile.
	m.	ch.	£	£
Darling Harbour Branch	1	42½	361,347	235,983
Sydney to Granville	13	36¼	1,870,807	139,061
Granville to Goulburn...............	121	5¾	2,513,073	20,757
Goulburn to Wagga	174	79¼	1,499,266	8,568
Wagga to Wodonga	79	13¾	914,236	11,547
Culcairn to Corowa..................	47	39	210,821	4,440
Junee to Hay	167	35¾	951,265	5,681
Narrandera to Jerilderie	64	54¾	409,435	6,330
Granville to Penrith	21	26¼	609,320	28,569
Penrith to Bathurst	109	27	2,358,239	21,568
Bathurst to Dubbo	134	5	1,174,870	8,763
Dubbo to Bourke.....................	225	45	1,345,164	5,964
Nyngan to Cobar.....................	81	27¼	301,646	3,708
Wallerawang to Mudgee	85	06	981,275	11,534
Blacktown to Richmond	16	12	175,146	10,845
Goulburn to Cooma..................	130	40	1,403,126	10,752
Cootamundra to Gundagai.........	33	45½	242,171	7,214
Cootamundra to Temora	38	69	167,244	4,303
Orange to Molong	22	60	269,821	11,860
Molong to Forbes	72	69	385,768	5,294
Murrumburrah to Blayney	110	63	1,079,121	9,740
Sydney to Kiama	71	53	1,950,559	27,218
Kiama to Nowra.....................	22	43½	362,916	16,098
Homebush to Waratah	93	03	2,625,886	28,224
Newcastle to Wallangarra.........	392	54	4,980,230	12,683
Werris Creek to Narrabri	96	48	566,985	5,869
Bullock Island Branch	1	45½	86,672	55,249
Morpeth Branch	3	37½	60,889	17,553
Hornsby to Milson's Point.........	13	27½	580,553	43,507
Lismore to Murwillumbah.........	63	57	880,468	13,819
Sydenham to Belmore	5	3½	179,333	35,555
Campbelltown to Camden.........	7	65	38,961	4,987
Kogarah to Sans Souci	4	71	12,111	2,478
Yass Tramway.....	2	73	28,339	9,730
Total or average......	2,531	23½	31,577,063	12,475

The amount expended on rolling-stock to the 30th June, 1896, was £4,349,140; for machinery, £284,382; on workshops, £631,864; and for furniture, £9,745; or £5,275,131 in all. This makes the total cost of all lines open for traffic, £36,852,194, or an average on all charges of £14,559 per mile. The growth of the capital expenditure on open lines may be traced below:—

Year.	Capital expended on lines open.	Year.	Capital expended on lines open.
	£		£
1855	515,347	1888	27,722,748
1860	1,422,672	1889	29,839,167
1865	2,746,373	1890	30,555,123
1870	5,566,092	1891	31,768,617
1875	7,245,379	1892	33,312,608
1880	11,778,819	1893	34,657,571
1885	21,831,276	1894	35,855,271
1886	24,071,454	1895	36,611,366
1887	26,532,122	1896	36,852,194

It will be seen that the cost of the lines open for traffic on the 30th June, 1896, as already stated, was £36,852,194. Of this amount, £903,565 has been provided out of the Consolidated Revenue of the colony, and debentures to the amount of £1,288,646 have been finally paid off, leaving a balance of £34,659,983 which has been raised by the issue of debentures and other stock. As will be seen hereafter, the net revenue for the year ending June, 1896, after paying working expenses, was £1,268,529, which gave a return of 3·44 per cent. upon the total capital expenditure on lines open for traffic, and 3·66 per cent. upon the capital on which the country has to pay interest. The so-called reduction of the railway debt, however, is purely imaginary, seeing that the bulk of the debentures retired were renewed out of fresh loans, and the sum paid from revenue to redeem loans was not furnished by railway profits. The proper comparison between railway earnings and interest charged is obtained from the net earnings of railways on cost of construction, and the actual interest paid by the State on outstanding loans. The net earnings of the railways represent 3·44 per cent. on the cost of construc-
but as th rice obtained for the loans of the colony
20 per the actual earnings of the railways cannot
m er cent., while the interest charged on
lo ent. Another point to be considered
was authorised by Parliament to be

expended in connection with the improvements to the grades on main lines, and the quadrupling of the suburban system. The cost of these urgent works was to be defrayed from the proceeds of loans, on the understanding that the loans should be redeemed from railway revenue at the rate of £75,000 a year, and already £375,000 has been nominally redeemed. This redemption has been effected at the expense of the general revenue, seeing that in the years when the redemption was made there was not sufficient railway revenue to meet working expenses and interest, and there has, therefore, really been no reduction of capital effected by these payments.

The cost of railway construction in the principal countries of the world for which figures are available, is given hereunder. The figures include the whole expense of equipping the lines for traffic, and are brought down to the latest available dates:—

Countries.	Cost per Mile open for Traffic.	Countries.	Cost per Mile open for Traffic.
	£		£
United Kingdom	47,280	Australasia:—	
France	27,375	New South Wales	14,559
Germany	20,415	Victoria	12,206
Switzerland	20,198	New Zealand	7,659
Norway	7,499	Queensland	7,271
Sweden	5,896	South Australia	7,353
Canada	11,830	Tasmania	8,386
United States	11,342	Western Australia	4,451
Cape Colony	9,018		

NEW LINES AND REVENUE RETURNS.

The contrast between the present condition of the New South Wales railways and their humble beginning in 1855 is a remarkable one. In 1856, the first year which can fairly be taken for purposes of comparison, the number of passengers on the railways was only 350,724, whilst in the year ended June 30, 1896, the number was 21,005,048, or nearly 60 times greater. But the tonnage of goods carried represents a very much larger increase, having grown [illegible],469 to 3,953,575 tons, or over 1,600 times since the first fu[illegible] railway op[illegible] (for the first ten years of the period under review the larger part of the railway earnings was obtained from the passenger traffic, no doubt due to the fact that the first railways were almost entirely suburban. It was not until the line crossed the mountains and opened up the far interior that the proportions changed, and the goods traffic became the principal source of revenue of the railways. This change began to take place in 1867.

The comparison between the earnings of the period prior to 1871—when the net result every year represented only a small portion of the interest due on the capital expended in the construction of the lines—and of the subsequent period, affords matter for satisfaction. The figures for 1886 and 1887 show a falling off from those of the previous fourteen years; but it should be borne in mind in comparing these two years with the excellent results exhibited during the period from 1874 to 1884, when an average of considerably over 4 per cent. was realised, that the fall in receipts was due in a great measure to the previous years of drought, and also to the uncertainty attaching to the land laws, which had recently been materially altered.

During the years 1884 and 1885 the last section of the main western line, extending over a distance of 112 miles as far as Bourke, was opened, and the line branching off from Wallerawang was completed as far as Mudgee, the length being 85 miles. On the south-western railway the branch line, Narrandera to Jerilderie, covering a distance of 65 miles, was opened for traffic. All these extensions run through very sparsely settled districts, and this was the case with regard to nearly the whole of the other 172 miles opened during the two years mentioned. This total of 412 miles opened for traffic in unproductive country caused a serious falling off in the proportion of receipts to expenditure during the period ended June, 1888, the net revenue yielding less than 3 per cent. on the total expenditure. Since that time, despite the addition of further unprofitable lines to the system, the returns have improved step by step, rising in the years 1891 and 1892 to 3·59 and 3·58 per cent., and during the past four years of depression never falling below 3·44 per cent., while in 1895 a return of 3·60 per cent. was obtained. As will be seen further on, the burden of unprofitable lines continues to be heavy, the loss on 1,117 miles during the the year ended 31st December, 1895, being no less than £374,200; but the expenses of working are kept as low as possible. The fact that the lines as a whole have not returned a profit should occasion no surprise, as the statistics of railways in all parts of the world show that few lines, except perhaps suburban ones, return anything like a profit during the first few years after their opening. In England a period of seven years has been allowed by good authorities for a line to develop traffic; and if such is the fact in more densely-populated countries, whose resources are more developed than is the case in New South Wales, [illegible] reason to be satisfied with the fact that the lines of this [illegible]ded so good a return as they have. And there is good cause to hope that under the present administration of the railways the deficiency will soon be met, as the returns for the year ended June 30, 1896, show that the interest on cost of construction was covered all but £109,006, if the total cost of the lines open for traffic be taken into consideration.

A glance at the table showing the net earnings, and the interest on the capital expended upon railways, which will be found on page 454, will disclose the fact that during the period from 1870 to 1875, when the length of new lines yearly constructed was very small, being only 116 miles during the whole period of six years, or about 19⅓ miles per year, the railway profits steadily increased from 1·81 to 4·39 per cent. During 1877 and 1878, 180 miles of railway were constructed, and the profits immediately declined to 3·74 and 3·34 per cent. respectively. From 1880 to 1884 the railways were extended chiefly to centres already populous and prosperous, viz., Riverina and New England, and the central districts of Goulburn, Wellington, and Dubbo; and as these were years of remarkable prosperity, the railway profits suffered less than usual from the considerable extension, which included the construction of the expensive connecting-link joining the New South Wales railways with those of Victoria, at the river Murray. From 1885 to 1895 the extensions on the main lines were for the most part through pastoral country, such as the continuation of the western line to Bourke, the northern line to Wallangarra, and the further extensions of the lines in the Goulburn district to the rich pastoral lands of Monaro; while several branch lines were constructed tapping important agricultural and dairy-farming districts, notably the lines Cootamundra to Gundagai, Cootamundra to Temora, Murrumburrah to Blayney, Nyngan to Cobar, Culcairn to Corowa, and Sydney to Nowra. None of the lines mentioned yet pays its way, the loss on some being very heavy. There was also constructed an isolated line, 63¾ miles in length, from Lismore to the Tweed, which likewise shows a heavy loss on working. In some cases the value of the branch lines will not be felt until the entire system of which they form part is completed, or until they become trunk lines. For instance, in the case of the Goulburn to Cooma line, a proposal is under consideration for continuing this line to the Victorian border, with a branch line to Eden, Twofold Bay. It is expected that the Gippsland line will be extended from Bairnsdale to the border, and that by the junction of these two lines an alternative route to Melbourne will be obtained. In that case, no doubt, the eastern part of Gippsland would find its natural port at Eden. Expensive new lines result in an increase of the percentage of working expenses to the gross earnings, as these lines have to be kept in full working order and repair whilst actually returning in gross earnings little more than the cost of maintenance. The small returns on expensive incompleted branches further tend to diminish greatly the profits of a railway system taken as a whole; but such is the history of railway construction in all parts of the world, and New South Wales is no exception to the general rule.

The following table shows the loss on non-paying lines during the last four calendar years. It should be noted that the capital cost includes the expenditure on equipment as well as construction :—

Line.	Capital Cost.	Loss in Working, after providing for Working Expenses and Interest.			
		1892.	1893.	1894.	1895.
	£	£	£	£	£
Goulburn to Cooma	1,462,111	45,796	45,107	43,096	43,453
Murrumburrah to Blayney	1,142,347	39,106	36,934	37,586	40,855
Cootamundra to Gundagai	253,805	6,859	6,763	6,474	5,628
Cootamundra to Temora	191,807	......*	†983	1,943	3,137
Junee to Hay	1,043,270	24,322	19,122	17,563	Nil.
Narrandera to Jerilderie	424,232	15,538	14,806	14,305	10,701
Culcairn to Corowa	232,368	2,131	7,818	8,023	7,925
Sydney to Kiama	2,182,602	56,777	38,356	41,091	42,204
Kiama to Nowra.....................	380,194	......*	†13,106	12,968	12,634
Sydenham to Belmore	198,082	......*	......*	......*	†7,518
Blacktown to Richmond	196,168	6,370	6,280	5,116	6,091
Wallerawang to Mudgee	1,042,817	29,517	30,097	28,514	29,704
Orange to Molong	287,421	6,204	6,890	3,750	4,732
Molong to Forbes	427,118	......*	†2,386	2,228	1,149
Nyngan to Cobar	323,932	4,332	9,026	3,588	2,184
Hornsby to St. Leonards	594,289	10,627	9,950	20,183	20,184
St. Leonards to Milson's Point...		......*	†12,848		
Werris Creek to Tamworth	296,905	......‡	......‡	4,764	4,493
Tamworth to Armidale	1,214,546	......‡	......‡	31,786	34,907
Armidale to Jennings	1,539,946	63,658	63,540	63,847	64,683
Lismore to Murwillumbah	916,034	......*	......*	†11,695	32,018
Total	14,349,994	311,237	324,012	358,520	374,200

* Not opened. † Opened for part of the [illegible] ‡ Not shown.

The Railway Commissioners in their annual report for 1891 suggested a plan of paying for new lines from the sale of lands. They recommended that the Crown lands for a distance of 10 miles on each side of a proposed line of railway should be set aside for sale, and half the proceeds of the land sold credited to the railway capital; and where the land required for railway construction had passed into the hands of private individuals, the land-owners should combine and convey the necessary land free of cost to the Government, it being considered that the owners would be fully remunerated for the gift of the land by the enhanced value of their property caused by the establishment of direct railway communication with the other parts of the colony. By the adoption of such a system as this it is believed that railways in light undulating country could be constructed at a moderate cost, and yield a fair return on capital from the commencement, especially what are known as "Pioneer Railways," which could be constructed at an average of about £1,750 per mile, exclusive of bridges.

The betterment system as applied to railways was first introduced in the construction of the Culcairn to Corowa Railway. No special Act was passed for the general establishment of this principle; but by a proviso in a clause of the Public Works Act the Government was empowered to apply the principle to all railways constructed subsequent to the date of the passing of the Act. In estimating the enhanced value of the land adjoining the Culcairn to Corowa railway line, the stations were assumed to be 10 miles apart, the betterment area having a 5-mile radius from each station, and the land in the vicinity of each station being considered to have an enhanced value of 25 per cent., graduating to 5 per cent. at the limit of the radius. In the case of the extension of the railway along the southern coast it is found that the enhanced value does not reach so high a percentage, owing to the facilities which exist for the transport of produce by water.

GROSS EARNINGS AND WORKING EXPENSES.

The gross amount of revenue derived from all sources connected with the Government railways in New South Wales during the year ended 30th June, 1896, was £2,820,417, being a decrease of £57,787 as compared with the preceding year. The working expenses were £1,551,888, or £15,701 less than in 1895; and the net earnings were £1,268,529—a decrease of £42,086 from the results obtained during the previous twelve months. The net earnings were, therefore, 45·0 per cent. of the total earnings, as against 33·3 per cent. when the Commissioners took office. The following table gives the gross earnings and the total working expenses with the proportion per cent. of the expenditure to the receipts.

It should be borne in mind that since the year 1887 the railway accounts have been made up to the 30th June in each year :—

Year.	Gross Earnings.	Working Expenses.	Proportion of working expenses to gross earnings.	Year.	Gross Earnings.	Working Expenses.	Proportion of working expenses to gross earnings.
	£	£	p. cent.		£	£	p. cent.
1855	9,249	5,959	64·4	1888	2,295,124	1,530,551	66·7
1860	62,269	50,427	81·0	1889	2,538,477	1,634,602	64·4
1865	166,032	108,926	65·6	1890	2,633,086	1,665,835	63·3
1870	307,142	206,003	67·1	1891	2,974,421	1,831,371	61·6
1875	614,648	296,174	48·2	1892	3,107,296	1,914,252	61·6
1880	1,161,017	647,719	55·8	1893	2,927,056	1,738,516	59·4
1885	2,174,368	1,458,153	67·1	1894	2,813,541	1,591,842	56·6
1886	2,160,070	1,492,992	69·1	1895	2,878,204	1,567,589	54·5
1887	2,208,295	1,457,760	66·0	1896	2,820,417	1,551,888	55·0

In the foregoing table will be found ample evidence of the economical working of the State railways under their present management, and this notwithstanding that the expenses per train mile run have increased. The explanation of this increase in the expense per train mile will be found in the fact that, although the business has increased, the management have contrived to reduce the mileage run, and have at the same time effected a thorough overhaul of the property in their hands. The distribution of expenses is shown below :—

Head of Expenditure.	1875.	1880.	1885.	1890.	1895.	1896.
	d.	d.	d.	d.	d.	d.
Maintenance of way.........	10·85	11·40	15·71	15·39	12·63	10·91
Locomotive power	17·40	16·33	15·62	16·73	15·63	16·58
Repairs—carriages, waggons, etc.	3·20	2·47	2·65	4·59	4·13	4·67
Traffic charges	14·38	15·83	14·92	15·07	13·96	13·60
Compensation	0·30	0·50	0·30	0·97	1·05	0·47
General expenses	2·15	1·46	3·52	2·16	2·14	2·01
Total	48·28	47·99	52·72	54·91	49·54	48·2[illegible]

The following table gives the percentage of earnings f[illegible] sources of railway revenue. It will be observed that in [illegible] the earnings from passenger traffic largely exceeded th[illegible] but after that year the proportion derived from that s[illegible] reaching the minimum in 1875. This falling off was a[illegible] due to the considerable extension of the main lines th[illegible] country, thinly populated, but well stocked with sheep and cattle, and consequently furnishing the railway with large quantities of produce for carriage to the seaboard. From 1880 to 1889, however, the percentage of receipts from passengers steadily advanced, the proportion in the year last named being as high as 40·4 per cent. of the total revenue. For the year ended 30th June, 1896, the passenger traffic contributed but 37·0 per cent. of the total railway earnings:—

Year.	Percentage of—		Year.	Percentage of—	
	Passenger Earnings to Total.	Goods Earnings to Total.		Passenger Earnings to Total.	Goods Earnings to Total.
1860	73·0	27·0	1889	40·4	59·6
1865	56·0	44·0	1890	40·2	59·8
1870	38·4	61·6	1891	39·6	60·4
1875	33·5	66·5	1892	38·3	61·7
1880	33·6	66·4	1893	38·1	61·9
1885	38·2	61·8	1894	37·2	62·8
1886	39·3	60·7	1895	35·1	64·9
1887	38·5	61·5	1896	37·0	63·0
1888	40·1	59·9			

NET EARNINGS AND INTEREST ON CAPITAL.

The net revenue for the year which expired on the 30th June, 1896, was £1,268,529, while the total amount of capital expended on lines in operation to the same period was £36,852,194. The net return on the capital expended equalled 3·44 per cent.—a less satisfactory return than that shown in any of the preceding five years, but only 0·30 per cent. below the average interest payable on the public debt, or 0·43 per cent. if the actual price received for stock be taken. The following table shows the net earnings and the interest returned on the total capital expended on railways, including the cost of both construction and equipment, for the year 1855 and subsequent periods:—

Year.	Net Earnings.	Interest on Capital.	Year.	Net Earnings.	Interest on Capital.
	£	per cent.		£	per cent.
1855	3,290	0·63	1888	764,573	2·85
1860	11,842	0·83	1889	903,875	3·14
1865	57,106	2·07	1890	967,251	3·17
1870	101,139	1·81	1891	1,143,050	3·59
1875	318,474	4·39	1892	1,193,044	3·58
1880	513,298	4·35	1893	1,188,540	3·48
1885	716,215	3·37	1894	1,221,699	3·46
1886	667,078	2·90	1895	1,310,615	3·60
1887	750,535	2·96	1896	1,268,529	3·44

Two important facts which demonstrate the financial position of the railways and the character of the management are the earnings per train mile and per average mile open. Although the returns now being realised cannot be compared with those of 1875, when the net earnings per train mile fell little short of 52d., and per mile open £775, the present earnings are in every way encouraging. Under the control of the Commissioners the net return per train mile has increased from 27·4d. to 39·5d., or 44·2 per cent.; while per mile of line open for traffic the advance has been from £374 to £506·1, or 35·3 per cent. The following table gives details of the net earnings since 1860 :—

Year.	Net Earnings per—		Year.	Net Earnings per—	
	Train Mile Run.	Average Mile Open.		Train Mile Run.	Average Mile Open.
	d.	£		d.	£
1860	15·9	189·5	1889	28·4	424·7
1865	28·3	399·3	1890	29·0	444·3
1870	26·9	307·4	1891	32·6	523·8
1875	51·9	774·8	1892	34·3	546·6
1880	38·0	653·1	1893	38·0	513·2
1885	25·9	430·6	1894	40·9	503·3
1886	24·7	372·6	1895	41·4	520·9
1887	27·8	387·7	1896	39·5	506·1
1888	27·4	374·0			

PASSENGER TRAFFIC.

The number of journeys made by each person in the colony now averages 16·6 per annum, as against 7·5 in 1880 and 1·6 in 1870. The increase has been exceedingly rapid as well as fairly uniform, as will be seen from the following table :—

Year.	Number of Journeys.	Year.	Number of Journeys.
1855	0·4	1888	14·9
1860	1·6	1889	15·3
1865	1·9	1890	15·8
1870	1·6	1891	17·0
1875	2·3	1892	17·1
1880	7·5	1893	16·6
1885	14·6	1894	15·7
1886	15·4	1895	15·8
1887	14·4	1896	16·6

The figures just given include journeys of season ticket-holders; excluding this traffic, the number of journeys per head would be about 10·1, a number larger than the average of any of the adjacent colonies, Victoria excepted. The average number of journeys made by the inhabitants of the United Kingdom is 24·5—a figure which largely exceeds that of any other population. With this exception, railway travelling is more common in Victoria, Western Australia, and New South Wales than in any other country. The averages of some of the more important places are:—Belgium, 16·0; France, 8·8; Germany, 15·5; United States, 9·3; Austria-Hungary, 3·1; Russia, 0·5; Norway, 3·0; Sweden, 3·1; Switzerland, 14·6; Netherlands, 5·4; Spain, 1·4; Italy, 1·6; South Australia, 15·2; Queensland, 4·7; Western Australia, 16·6; New Zealand, 6·0; and Tasmania, 3·3. For Victoria the average is set down at 34·7; but this figure is obtained by reckoning a passenger once for each of several sections passed over in the course of the same journey, and is useless, therefore, for purposes of comparison. The total number of journeys made by passengers, including season ticket-holders; the revenue received from the passenger traffic, and the average receipts per journey, are shown in the next table, which should be read in conjunction with that just given:—

Year.	Passenger journeys.	Receipts from Passenger Traffic.	Average Receipts per journey.
	No.	£	d.
1855	98,846	9,093	22·08
1860	551,044	45,428	19·79
1865	751,587	92,984	29·69
1870	776,707	117,854	36·42
1875	1,288,225	205,941	38·37
1880	5,440,138	390,149	17·21
1885	13,506,346	830,904	14·76
1886	14,881,604	849,253	13·70
1887	14,451,303	850,499	14·12
1888	15,174,115	918,975	14·53
1889	16,086,223	1,025,601	15·30
1890	17,071,945	1,059,791	14·90
1891	19,037,760	1,177,037	14·84
1892	19,918,916	1,189,231	14·33
1893	19,932,703	1,115,042	13·43
1894	19,265,732	1,047,029	13·04
1895	19,725,418	1,022,901	12·45
1896	21,005,048	1,043,922	11·93

It will be seen that 1896 shows a far larger number of passenger journeys than preceding years, but a less satisfactory result in the way of receipts. This does not so much arise from curtailment of long-distance travelling as from the change of a large body of travellers from first to second class—a result due to diminished means. A return to prosperous times will show an increase in first-class travellers, but it frequently happens that the removal o
not followed by a return to previo
continue to suffer in revenue eve
suffering has disappeared.

The traffic on the suburban lines, which comprise only distances within 20 miles of Sydney and Newcastle, Liverpool and Morpeth included, has enormously increased of late years. In the following table a comparison is instituted between the traffic for the years ended 30th June, 1891, 1895, and 1896 :—

Suburban Traffic.	1891.	1895.	1896.
Number of ordinary passengers	9,384,425	10,192,545	10,635,753
,, workmen's journeys	2,422,644	2,816,016	3,306,996
,, season ticket holders' journeys	4,127,192	4,326,542	4,608,828
Total passenger journeys	15,934,261	17,335,103	18,551,577
Number of miles travelled	89,270,546	98,432,950	104,310,788
Average mileage per passenger	5·61	5·68	5·62
Amount received from passengers	£252,271	£244,926	£252,025
Average receipts per mile, per passenger	0·68d.	0·60d.	0·58d.

The average receipts from passenger traffic per head of population advanced very rapidly until 1891, when the amount stood at 20s. 11·8d., against 10s. 8·5d. in 1880, and 4s. 9·7d. in 1870. This was not due so much to the increased distance travelled by passengers as to the fact that the railway mileage increased at a greater rate than the population, enabling the public to indulge in a larger measure of railway travelling, in accordance with the well-established rule that the more facilities for travelling are extended, the greater will be the traffic. Since 1891 the average has lessened and now stands at 16s. 4·1d. In this connection it may be interesting to note that the fares charged on the suburban lines, over which the majority of passengers travel, are very much less for both classes of travellers than the English rates, although the cost of working is very much higher. The receipts from passenger traffic per head of the population will be found in the following figures :—

Year.	Amount per head.	Year.	Amount per head.
	s. d.		s. d.
1860	2 7·8	1889	19 6·2
1865	4 7·8	1890	19 7·1
1870	4 9·7	1891	20 11·8
1875	7 10·2	1892	20 4·9
1880	10 8·5	1893	18 7·4
1885	17 11·1	1894	17 1·4
1886	17 6·2	1895	16 4·2
1887	16 11·1	1896	16 4·1
1888	18 0·2		

GOODS TRAFFIC.

The weight of goods carried per head of population in New South Wales compares favourably with that of many countries where railways have long been established. The average tonnage for 1860 and subsequent periods was:—

Year.	Tons.	Year.	Tons.
1860	0·2	1889	3·3
1865	1·2	1890	3·5
1870	1·6	1891	3·4
1875	2·2	1892	3·7
1880	2·4	1893	3·2
1885	3·5	1894	2·9
1886	3·3	1895	3·3
1887	3·3	1896	3·1
1888	3·3		

The largest amount of tonnage per inhabitant is in the United States where it averages 10·8; the lowest European country is Italy, with only 0·5 tons per head. The relative position of New South Wales will be seen from the next table, which shows the tonnage of merchandise carried per head of population in the principal countries of the world:—

	Tons.		Tons.
United States	10·8	Russia	0·7
United Kingdom	8·8	Spain	0·6
Belgium	7·6	Italy	0·5
Germany	4·9	Australasia—	
Canada	4·2	New South Wales	3·1
Switzerland	3·6	Victoria	1·7
Austria-Hungary	2·7	Queensland	2·2
Sweden	2·5	South Australia	3·2
France	2·6	Western Australia	4·2
Netherlands	1·9	Tasmania	1·3
Norway	0·8	New Zealand	3·1

The following figures, which extend as far back as the first opening of the lines, show how greatly the goods traffic has expanded, especially in recent years:—

Year.	Tonnage of Goods.	Earnings.	Year.	Tonnage of Goods.	Earnings.
		£			£
1855	140	156	1888	3,399,772	1,376,149
1860	55,394	16,841	1889	3,485,839	1,512,876
1865	416,707	73,048	1890	3,788,950	1,573,295
1870	766,523	189,288	1891	3,802,849	1,797,384
1875	1,171,354	408,707	1892	4,296,713	1,918,065
1880	1,712,971	770,868	1893	3,773,843	1,812,014
1885	3,273,004	1,343,464	1894	3,493,919	1,766,512
1886	3,218,582	1,310,817	1895	4,075,093	1,855,303
1887	3,339,253	1,357,796	1896	3,953,575	1,776,495

It is unfortunately impossible to subdivide the tonnage of goods just given for 1895–6 into anything approaching a general classification, but this can be done for the year which closed with December, 1895. In the statement here given, which relates to the year in question, will be found particulars of the tonnage under eight broad classes, the average distance goods of each class were carried, and the average earnings per ton per mile. This last figure, however, does not include the terminal charges, which would probably increase the revenue per ton per mile by about ·20d., or from 1·44d. to 1·64d. The "Miscellaneous and A class" comprises timber, lime, manures, fruit, vegetables, hides, tobacco leaf, bricks, gravel, drain-pipes, and traffic of a similar nature.

Description of Traffic.	Tons carried.	Average number of miles each ton of traffic is carried.	Earnings per ton per mile.
Coal and shale	2,475,404	17·02	0·61d.
Firewood	190,507	25·99	0·84d.
Grain and flour	267,593	158·58	0·58d.
Hay, straw, and chaff	88,581	170·94	0·42d.
Miscellaneous and A class	284,006	74·26	0·84d.
Wool	104,568	278·05	2·38d.
Live stock	179,823	268·32	1·79d.
General merchandise and other traffic not classified	470,649	120·22	2·46d.
	4,061,131	63·94	1·44d.
Terminal charges	....	....	0·20d.
Total	4,061,131	63·94	1·64d.

The statement which is given below shows the receipts for carrying goods one mile along the lines of the colony. The information reaches back to 1872, when the charge was 3·6d., while after an interval of twenty-three years it had fallen to 1·6d. The decrease, however, is to some extent more apparent than real, inasmuch as it represents a more extensive development of the mineral trade than of the carriage of general merchandise; but when due allowance has been made on this score, it will be found that the benefit to the general producer and consumer has been very substantial:—

1872	3·6d.	1883	2·0d.
1873	3·3d.	1884	1·9d.
1874	3·0d.	1885	1·9d.
1875	3·1d.	1886	1·8d.
1876	2·8d.	1887	1·8d.
1877	2·7d.	1891	1·9d.
1878	2·4d.	1892	1·8d.
1879	2·3d.	1893	1·8d.
1880	2·3d.	1894	1·8d.
1881	2·3d.	1895	1·6d.
1882	2·1d.		

The figures just given should not be too strongly relied upon in comparing one year with another; but they may safely be taken as indicating generally the lessened cost of carriage to persons forwarding goods by rail. The reduction is most noticeable in regard to agricultural produce and live stock.

During the year ended 30th June, 1895, some important reductions were made in the rates for the conveyance of goods and live stock. The rates for cattle were lowered to the scale of charges applicable to sheep, being practically a reduction of 20 per cent. In March a general revision of the goods classification was made, by which many articles were placed in lower classes. The rates for coal in the Newcastle district, and from the western mines to Sydney and district, were also slightly reduced. By a revision of the wool tariff, the anomaly of charging higher rates from stations nearer to Sydney and Newcastle than from others at longer distances on the same line, but which are affected by the interior river and other competition, was entirely removed. In April, 1896, a general reclassification of goods came into force, by which a large number of articles were reduced to lower classes. Further reductions were made at the same time in the rates for the carriage of agricultural produce over long distances. The rates for agricultural implements forwarded in 5-ton truck loads were reduced by 50 per cent. and for small consignments by 20 per cent. To assist the mining industry, the rates for explosives and mining machinery were also reduced, the latter by 50 per cent.

The revenue from goods traffic per inhabitant rose rapidly from the opening of the lines until the year 1883, when it stood at 30s. 4d., at which figure it remained in 1884. The unfavourable seasons experienced during the subsequent years greatly affected the traffic, and the revenue in 1888 had fallen to 27s. per inhabitant. For a number of years afterwards there was a steady increase, and in 1892 the amount stood at 32s. 11d.—the highest figure yet attained; in 1894, however, this had decreased to 28s. 10d., but in 1895 the amount rose to 29s. 7d. In 1896, owing chiefly to the diminished wool traffic, and partly also to the Newcastle strike, the amount fell to 27s. 10d. The results achieved must be regarded as very satisfactory, especially in face of the general reduction in the freights :—

Year.	Amount.	Year.	Amount.
	£ s. d.		£ s. d.
1860	0 0 11·8	1889	1 8 9·4
1865	0 3 7·8	1890	1 9 1·0
1870	0 7 8·7	1891	1 12 0·5
1875	0 13 11·8	1892	1 12 11·0
1880	1 1 1·9	1893	1 10 3·1
1885	1 8 11·7	1894	1 8 10·6
1886	1 7 0·5	1895	1 9 7·8
1887	1 7 0·3	1896	1 7 9·6
1888	1 6 11·7		

The rolling stock of the New South Wales railways, on the 30th June, 1896, consisted of 521 engines, 441 tenders, 1,032 coaching stock, 9,525 goods vehicles, and 1,060 stock for departmental use only, making a total of 12,579 stock, and showing an increase of 31 goods vehicles, and a decrease of 2 locomotives, 12 coaching stock, and 3 departmental stock on the figures for the previous year. Despite these decreases, however, the total traction power and carrying capacity have been increased. The number of engine miles run was 10,895,776, while the train miles numbered only 7,719,618.

During the year ended June, 1896, the wages paid by the Railway Department amounted to £1,022,309 as against £959,920 in the previous year. Of the former sum, the Maintenance Branch took £309,311, and the Locomotive Branch £479,838, while the Traffic Branch absorbed £233,160. Additions and improvements to stations, buildings, siding accommodation, etc., and rolling stock during the year cost £59,940, which was charged to capital account.

Compensation for personal injury was paid during the twelve months to the amount of £14,277, and for damage to and loss of goods, £971.

Of the former sum, £13,567 represents claims in connection with the lamentable accident at Redfern Station in October, 1894, making with the sum of £30,000 disbursed on the same account during the previous year, a total of £43,567, with a few small claims yet unsettled. Since the date of the accident the Government has passed an Act limiting the amount recoverable from the Railway Commissioners in connection with injuries sustained by any one person to £2,000.

The cost of fuel is, naturally, a large item in the railway accounts. For the last working year the expenditure on coal, coke, and wood totalled £72,706. The coal consumed on the locomotives amounted to 261,857 tons, or an average of ·67 cwt. per train mile.

There were altogether 9,745 persons employed on the railways of the colony on the 30th June, 1896, of which number 1,229 comprised the salaried staff, and 8,516 were on wages. For the previous year the total number was 9,229, of whom 1,241 were on salary and 7,988 on wages.

The management of the State railways of New South Wales was in the hands of a single Commissioner, under the Secretary for Public Works, up to the month of October, 1888. At that date the service was transferred to the department of the Colonial Treasurer, and the actual administration of the railways was entrusted to three Commissioners, to whom were given very extensive powers, amounting in fact to almost independent control. The change was made with the view of securing economic management of the lines, free from political interference.

Private Railway Lines.

In New South Wales the established policy has hitherto been to keep the railways under State management and control, and at the present time there are only four private lines in operation, with the exception of short lines to connect coal-mines with the main railways, etc. The Parliament granted permission to a company to construct a line from Deniliquin, in the centre of the Riverina district, to Moama, on the Murray, where it meets the railway system of Victoria. A considerable proportion of the wool and other produce of Riverina reaches the Melbourne market by this route. The line is 45 miles in length, and was constructed under a special Act of Parliament, assented to on the 3rd March, 1874. The land required was granted by the New South Wales Government, right being reserved for the purchase of the line at any time after twenty-one years from the passing of the Act. The total capital expended is £162,672, £40,000 of which was raised by debentures, and there is a reserve fund of £14,187. The dividends formerly paid averaged 10 per cent., but the latest dividend declared was at the rate of 5 per cent. per annum. During the year 1888 a line, [illegible] miles 54 chains in length, was laid down from the Barrier silver mines, Silverton, and Broken Hill to the S[illegible]tralian border. The [illegible] capital expended is £317,270, of which £80,000 was raised by debentures, and there is a reserve fund of £35,000. The line since its inception has had large support. In 1891 the large dividend of 70 per cent. was declared. The latest dividend declared was at the rate of 2s. per share. A short line connects Clyde with the Rosehill Racecourse, and another joins Liverpool with the Warwick Farm Racecourse. The following table shows the operations of these lines during the year 1895:—

Name.	Line.		Total Capital Expended.	Reserve Fund.	Debentures Outstanding.	Passengers Carried.	Goods Carried.	Live Stock Carried.	Train Miles Run.
	Length.	Gauge.							
	m. ch.	ft. in.	£	£	£	No.	Tons.	No.	No.
Deniliquin and Moama.	45 0	5 3	162,672	14,187	31,400	13,537	26,664	154,000	60,786
Silverton	35 54	3 6	317,270	35,000	Nil.	42,943	512,710	4,213	168,021
Clyde to Rosehill ..	3 0	4 8½	48,000	Nil.	Nil.	26,831	303	677	308
Warwick Farm ..	0 60	4 8½	5,700	..	..	22,794	Nil.	1,536	89

The Deniliquin and Moama Company possesses 4 locomotives, 6 passenger carriages, and 63 goods carriages and vans; and the Silverton Company has 15 locomotives, 17 passenger carriages, and 600 goods vehicles. On the Rosehill and Warwick Farm lines Government rolling-stock is used.

Authority was obtained during 1893 for the construction of two private lines, namely, from Menindie to Broken Hill, in the Western district, and from Rosehill to Dural (Simpson's), in the Parramatta district. Three and a half miles of the latter line have been constructed, but not yet opened for traffic.

RAILWAY ACCIDENTS.

The railways of the colony have been as free from accidents of a serious character as the lines of most other countries. In order to obtain a common basis of comparison it is usual to find the proportion which the number of persons killed or injured bears to the total passengers carried. There is, however, no necessary connection between the two, for it is obvious that accidents may occur on lines chiefly devoted to goods traffic, and a more reasonable basis would be the accidents to passengers only compared with the number of passengers carried. The data from which such a comparison could be made are wanting for some countries; as far as the figures can be given, however, they are shown in the following table, which exhibits the number of passengers killed and injured per million persons carried. The figures are calculated over a series of years and brought down to the latest possible dates :—

Countries.	Average per million passengers carried.		Countries.	Average per million passengers carried.	
	Killed.	Injured.		Killed.	Injured.
Germany	0·1	0·4	Russia	0·7	2·5
Austria-Hungary	0·1	1·2	United Kingdom	0·1	1·2
Belgium	0·1	1·0	Spain	0·9	3·8
Sweden	0·1	0·2	Canada	1·0	3·9
France	0·3	1·3	New South Wales	0·4	2·6
Italy	0·3	2·0	Victoria	0·1	2·7
Norway	0·1	0·1	South Australia	0.1	0·5
Holland	0·1	0·3	New Zealand	0·7	2·6
Switzerland	0·7	2·1			

The above mode of comparison is not, however, a perfect one as the question of the distance travelled by each passenger is an important element of the risk run, and is omitted from consideration. If this were made a factor of the comparative statement, it would probably be found that the risk of each traveller by rail would show less variation in the different countries than would seem to be the case from the figures just given.

The persons meeting with accidents on railway lines may be grouped under three heads—passengers, servants of the railways, and trespassers; and the accidents themselves may be classified into those arising from causes beyond the control of the person injured, and those due to misconduct or want of caution. Adopting these classifications, the accidents on the New South Wales Railways during the year ended June 30, 1896, were as follow :—

Accidents arising.	Passengers.		Railway Employés		Trespassers, etc.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
From causes beyond their control	...	...	...	4	...	...	...	4
Through misconduct or want of caution	5	27	9	79	11	8	25	114
Total	5	27	9	83	11	8	25	118

These figures show a large decrease from those for 1894-5, the accident which occurred at Redfern Station in October, 1894, being alone responsible for 13 killed and 30 injured.

The returns of the railways of the United Kingdom show that during the year 1895 the number of persons killed was 1,024, and of persons injured, 4,021. The passengers killed and injured numbered 83 and 1,109 respectively, or 0·1 and 1·2 per million passengers carried; 442 railway employés were killed, and 2,654 were injured; there were 96 cases of suicide; and the other persons killed and injured were trespassers and persons who were crossing the lines.

In the following statement particulars regarding accidents on the lines of the colony are given for ten years:—

Year.	Passengers.		Railway Employés.		Trespassers, etc.		Total.	
	Killed.	Injured	Killed.	Injured	Killed.	Injured	Killed.	Injured.
1886	3	40	12	18	15	5	30	63
1887	10	90	16	17	12	5	38	112
1888-89	3	38	16	27	12	9	31	74
1889-90	6	53	22	103	27	20	55	176
1890-91	7	42	32	114	21	14	60	170
1891-92	17	58	26	163	7	7	50	228
1892-93	7	47	10	87	11	5	28	139
1893-94	8	33	7	93	13	18	28	144
1894-95	16	77	17	70	9	13	42	160
1895-96	5	27	9	83	11	8	25	118
Total	82	505	167	775	138	104	387	1,384

TRAMWAY AND OMNIBUS TRAFFIC.

Within the Metropolis of Sydney the public traffic, with the exception of the tramway system, is controlled by four Transit Commissioners, comprising the Mayor of Sydney, the Inspector-General of Police, a representative elected by the Aldermen of Suburban Municipalities, and one by the holders of licenses under the Commissioners. The tramways, like the railways, are the property of the Government, and are under the control of the Commissioners for Railways. There were in the year ended June, 1896, five distinct systems of tramways in operation, consisting of the Metropolitan and the Ashfield to Enfield lines, measuring together 42 miles; the North Sydney cable tramway, 2 miles; the North Sydney (Military Road) electric tramway, 2 miles; the King-street to Ocean-street cable tramway, 2½ miles; and the Newcastle to Plattsburg Tramway (including Merewether and Tighe's Hill sections), 12 miles; giving a total of about 61 miles of lines in use. The Campbelltown and Camden line, 7½ miles, and the Kogarah and Sandringham line, 5 miles, formerly classed as tramways, are now included under the head of railways.

The metropolitan tramways may fairly be regarded as street railways, and they are worked by locomotives of a special construction. A cable tramway was inaugurated at North Sydney some years ago;

and a line of a similar class, extending from the heart of Sydney to the suburb of Woollahra, *via* William-street, was completed in 1894, and opened on the 19th September in that year. The electric system was tried on a short line joining the Waverley and Randwick tram-lines, but proved less economical than steam power, and accordingly was abandoned in April, 1892, in favour of steam. The electric plant has been transferred to a tramway constructed along the Military Road, North Sydney, and opened in September, 1893. On the 1st March, 1897, an extension of the electric tramway from the terminus on the Military Road to the ferry at Mosman's Bay was opened to traffic. A bill was passed in 1896 for the construction of an electric tramway from Circular Quay, along George-street, to the Redfern Railway Station; and it is intended to construct another electric tramway from the terminus of the cable tramway, at Falcon-street, North Sydney, to the village of Willoughby.

The net return on tramway capital has varied greatly from year to year. The favourable results of the first four years encouraged the belief that the metropolitan tramways would prove a source of increase to the general revenue of the colony; but these anticipations were not realised during the next seven years, and it was not until 1890 that the net earnings exceeded the rate of interest payable on the money borrowed for the construction of these works. The following table gives some interesting particulars respecting the metropolitan tramways, exclusive of the King-street to Ocean-street cable tramway and the North Sydney cable and electric tramways. In the year 1879 the tramways were open for only three and a half months, and for part of that time were worked by horse power. The accounts since 1887, like those relating to the railways, have been made up to the 30th June in each year:—

Year.	Length of Line.	Tram Mileage.	Total Earnings.	Working Expenses.	Earnings per Tram Mile.	Working cost per Tram Mile.	Proportion of working cost to gross earnings.	Net Earnings.	Capital invested on Lines open.	Interest on Capital.
	miles.		£	£	d.	d.	p. cent.	£	£	per cent.
1879	1½	13,270	4,416	2,278	79·87	41·19	51·50	2,138	22,269	33·09
1880	4	84,074	18,980	13,444	54·18	38·38	70·83	5,536	60,218	12·34
1881	9½	296,906	62,549	52,107	50·56	42·12	83·31	10,442	169,450	6·16
1882	22	670,649	126,202	103,136	45·16	36·91	81·72	23,066	412,561	6·80
1883	25	1,076,096	190,699	178,877	42·53	39·89	93·80	11,822	544,105	2·22
1884	27½	1,242,491	219,942	215,167	42·48	41·56	97·83	4,775	648,111	0·76
1885	27½	1,220,500	223,340	207,995	43·91	40·90	93·13	15,345	708,109	2·17
1886	27½	1,222,943	226,367	201,737	44·42	39·59	89·12	24,630	742,113	3·32
1887	29½	1,220,026	214,125	201,468	42·12	39·63	94·08	12,657	731,582	1·76
1888	29½	1,246,543	221,060	204,227	42·56	39·32	92·38	16,833	742,555	2·27
1889	29½	1,338,386	225,833	206,092	40·49	36·95	91·25	19,741	771,255	2·56
1890	30½	1,474,646	249,508	207,517	40·60	36·46	83·17	41,991	790,555	5·31
1891	33½	1,553,048	270,365	221,505	41·78	34·23	81·92	48,860	857,455	5·74
1892	37	1,613,443	279,321	229,145	41·55	34·09	82·04	50,176	932,907	5·54
1893	38	1,681,232	271,041	214,824	38·69	30·67	79·26	56,217	947,775	5·94
1894	40¼	1,737,846	250,809	206,554	34·64	28·53	82·35	44,255	954,035	4·64
1895	40¼	1,740,235	230,583	186,081	31·80	25·66	80·70	44,502	962,037	4·62
1896	40¼	1,845,626	227,525	187,811	29·59	24·42	82·54	39,714	961,778	4·13

The fares paid on the tramways average about 1d. per mile, the lines being divided into sections of about 1 and 2 miles. The number of persons using the tram-cars has not been ascertained with any exactness, as the tickets collected give only a partial indication of the number travelling. It is believed that the fares paid by passengers average 3d. a journey, so that the number of journeys in the year ended 30th June, 1896, reached the enormous total of 17,772,660, or about 44 for every person living in the metropolitan area. Cash fares in lieu of tickets are allowed, although this system does not largely prevail, as an extra fee is charged when money is tendered.

The following table shows the total and average cost of the various sections of the metropolitan steam tramways open on the 30th June, 1896:—

Section.	Length.		Total Cost.	Cost per mile.
	ms.	chs.	£	£
Railway Station to Bridge-street	1	59	95,640	55,045
Liverpool-street to Randwick and Coogee	5	9	113,413	22,183
Darlinghurst Junction to Waverley and Woollahra	4	40	60,330	13,407
Waverley to Bondi Beach	2	8	38,204	18,192
Waverley to Randwick	1	30	11,181	8,132
Crown-street Junction to Cleveland-street	0	69	16,952	19,654
Railway Station to Glebe and Forest Lodge	2	25	40,050	17,319
Newtown and Parramatta-street Junction to Dulwich Hill	4	7	63,661	15,575
Forest Lodge Junction to Leichhardt, Five Dock, and Abbotsford	6	57	61,409	9,148
Railway Station Junction to Botany	6	66	90,787	13,302
Forest Lodge to Gladstone Park, Balmain	2	66	28,481	10,082
Newtown Bridge to St. Peters	0	63	13,199	16,761
Redfern to Moore Park	1	6	18,558	17,263
Cost of construction	40	25	651,865	16,170
Equipment:—				
Tramway workshops £55,261				
Rolling stock 240,197				
Machinery 12,342				
Furniture 2,113	......		309,913	....
Total or average	40	25	961,778	23,858

The cost of construction and equipment of the Ashfield to Enfield line, which was opened on 23rd September, 1891, was £16,371. For the year ended June, 1896, the revenue amounted to £997, and the working expenses to £1,646, showing a loss of £649 in connection with actual working, or of £1,222 if the interest on capital be taken into consideration. The number of passenger fares collected was 239,422.

The revenue of the North Sydney cable line was £11,340, and the expenses £8,449. The net receipts, therefore, amounted to £2,891, or 2·61 per cent. upon £114,428, the total cost of the line and its equipment. The number of passenger fares collected was 2,721,682.

The North Shore electric tramway yielded a revenue of £2,209 ; and the working expenditure totalled £2,041, or within £168 of the gross receipts. The loss on the working of the line was £864. The number of passenger fares collected was 530,215. The cost of construction of this line amounted to £27,601.

On the King-street to Ocean-street cable tramway the receipts amounted to £27,563, and the working expenses were £19,152, leaving a net return of £8,411, or 4·75 per cent. upon £177,180, the total cost of the line and its equipment. The number of passenger fares collected was 6,614,277.

The Newcastle to Plattsburg tramway line and contingent sections showed a gross revenue of £19,547, while the working expenses totalled £17,184, so that the net receipts for the year came to £2,363. The cost of construction and equipment was £137,538, so that the net return was 1·72 per cent. upon the capital invested, as against 2·61 per cent. in the previous year. The number of passenger fares collected was 4,685,689.

In the following table are given the revenue and expenditure on and the capital invested in all State tramways since their inception in 1879. The Camden to Campbelltown tramway was placed among the railways during 1888, and the Kogarah-Sans Souci line was similarly dealt with in 1889 :—

Year.	Total Length of Lines.	Capital Expended.			Value of Fares received.	Total Earnings.	Working Expenses.	Net Earnings.
		On Lines open for Traffic.	On Extensions not opened.	Total.				
	Miles.	£	£	£	£	£	£	£
1879	1½	22,061	....	22,061	4,416	4,416	2,278	2,138
1880	4½	60,218	1,683	61,901	18,968	18,980	13,444	5,536
1881	11½	181,659	38,659	220,318	61,921	62,549	52,107	10,442
1882	29½	447,939	10,206	458,145	127,124	128,354	120,181	8,173
1883	32½	579,439	104,686	648,125	190,209	193,929	183,218	10,711
1884	35	683,179	106,320	789,499	218,885	223,454	215,086	8,368
1885	35	748,506	142,217	890,723	220,332	227,144	207,898	19,246
1886	36½	854,260	131,342	985,602	230,374	234,143	207,635	26,508
1887	51	917,995	105,640	1,023,635	225,764	229,772	211,722	18,050
1888	43½	907,987	106,757	1,014,664	241,838	241,838	217,629	24,209
1889	38½	909,595	107,333	1,016,928	243,563	243,563	221,835	21,728
1890	39½	933,614	87,194	1,020,808	262,835	268,962	224,073	44,889
1891	42½	1,004,212	35,866	1,040,078	292,499	292,850	239,679	53,171
1892	48	1,099,659	28,946	1,128,605	304,899	305,090	248,591	56,499
1893	49	1,118,471	94,590	1,213,061	295,352	295,367	233,808	61,559
1894	58½	1,248,986	79,923	1,328,909	278,185	278,194	229,283	48,911
1895	61	1,428,518	....	1,428,518	282,316	282,316	230,993	51,323
1896	61	1,434,896	....	1,434,896	289,181	289,181	236,283	52,898

During the year ended June, 1896, the total amount of wages paid by the Tramway Department was £165,100, as against £165,181 in the previous year, and £161,635 in 1894. Of the sum of £165,100, £25,307 was paid to the Maintenance Branch, £97,450 to the Locomotive Branch, and £42,343 to the Traffic Branch.

The number of men employed was 1,347, as against 1,292 in 1895 and 1,216 in the previous year. The salaried staff numbered 42, and 1,305 were on wages. Taking railways and tramways together, the number of persons employed was 11,092, of whom 1,271 were on the salaried staff, and 9,821 were on wages. To the latter the sum of £1,187,409 was paid as wages during the year, being £1,022,309 for services on the railways, and £165,100 for the performance of work on the tramways. The payments for wages in 1895 were:—Railways, £959,920; tramways, £165,181; total, £1,125,101. In the preceding year the wages were:—railways, £987,925; tramways, £161,635; total, £1,149,560. The average number of working days for the workshop staff for the year ended June, 1896, was 309¼, as against 275 for the previous year and 254 for 1893-4; and the receipts per man on the wages staff—railways and tramways—averaged £121 12s. 8d. for the twelve months.

Any statement as to the number of persons injured on the tramways of the city compared with the total number of persons carried, must be taken as approximate, as the latter is not definitely known. A record of the accidents which occurred during the year ended 30th June, 1896, shows them to have been 31 in number, of which 9 were fatal, and 22 were cases of injury. There were 2 fatal accidents, and 11 cases of non-fatal accident, to passengers. One servant of the Department was killed, and 7 employés were injured. Ten accidents in connection with trams occurred to persons who were neither passengers nor employés, 6 of which were fatal, and 4 non-fatal.

The number of passengers carried on the tramways probably exceeds 23,250,000, which would give the rate of fatal accidents to passengers as 0·086 per million, and of non-fatal accidents as 0·473 per million. Seeing that the tramways for a great part of their course traverse crowded streets, the number of fatal and non-fatal accidents—6 and 4 respectively—to persons who were neither passengers nor employés must be considered very small.

PRIVATE TRAMWAYS.

There are two tramways under private control within the Metropolitan area. One of these branches from the Illawarra Line at Rockdale and runs down to Lady Robinson's Beach, a distance of 1 mile, being chiefly used by excursionists visiting the shores of Botany Bay. The line was constructed in 1885. The second line passes through the township of Parramatta. It commences at the Park Gates, and continues as far as the Newington Wharf at Duck River, a distance of 3 miles, where it connects with the Parramatta River steamers conveying passengers and goods to and from Sydney. The line was laid down in 1883. A private tramway 2¾ miles in length was opened in 1891 from Fassifern to Toronto, on Lake Macquarie.

A private line was some time ago constructed at North Sydney for the purpose of connecting the cable tramway on the heights of St. Leonards with the village of Gordon. On this line a magnificent suspension bridge has been built, the only one of its kind in the colony. It is designed in three spans—one of 500 ft., and two end spans each of 150 ft., with an altitude of 180 ft. above water level. The tramway was, however, not quite completed, and has never been opened for traffic.

A Bill was passed in 1896 authorising the construction of a private tramway, 21 miles in length, to connect with the Government railway near Capertee on the line from Wallerawang to Mudgee.

OMNIBUSES, CABS, AND WAGGONETTES.

In addition to the tramways, the citizens of Sydney are well provided with means of travelling within the city and suburban limits, as there are numerous omnibus and cab proprietaries. The traffic employs a little over 8,900 horses and, including the licensed drivers, some 3,300 men.

The number of cabs and waggonettes registered and licensed by the Transit Commissioners under the Municipal by-laws is 1,130, in addition to which there are 603 vans and other vehicles. The public interest is secured against exaggerated demands on the part of licensed cabmen and other drivers of public vehicles by a system of fares fixed on a scale liberal to the licensee, whilst not too high for the public to fairly pay. The drivers are placed under the direct control of the Transit Commissioners, who have power to obtain redress from the owners of the vehicles, should any just complaints be made against them. The following shows the number of vehicles of each class licensed during the year 1895, and the number of registered drivers:—

Description.	Vehicles.	License Fees.	Drivers, etc.	License Fees.
	No.	£	No.	£
Omnibuses	348	1,666	*597	268
Waggonettes	19	73		
Cabs	1,111	1,626	1,406	674
Drays and vans	603	559	596	149
Total	2,081	3,924	2,599	1,091

* Includes 57 conductors.

POSTS AND TELEGRAPHS.

In the matter of postal and telegraphic communication the colony of New South Wales is liberally provided for. Not only is the intercolonial telegraphic system fairly perfect, but the colony is in direct communication with Europe and the outer world by means of the cables connecting with the various Asiatic continental telegraph lines. A submarine cable also connects the colony with New Zealand, and has its Australian terminus within sight of the spot where Captain Cook landed on the shores of Botany Bay, and within a stone's throw of the monument erected to the memory of La Pérouse—the unfortunate and gallant emulator of the great English navigator—and the tomb of Père Le Receveur, the botanist attached to his staff.

The history of the Postal Department of New South Wales is interesting as affording a striking illustration of the manner in which very small beginnings have led to great results. For the first twenty-three years of the colony's existence there were neither regular post-offices nor means of postal communication. The first post-office was established by Governor Macquarie in the year 1810, Mr. Isaac Nichols being appointed Postmaster. The office was in High-street (now known as George-street), at the residence of Mr. Nichols, who was, "in consideration of the trouble and expense attendant upon this duty," allowed to charge, on delivery to the addressee, 8d. for every English or foreign letter of whatever weight, and for every parcel weighing not more than 20 lb., 1s. 6d., and exceeding that weight, 3s. The charge on Colonial letters was 4d., irrespective of weight; and soldiers' letters, or those addressed to their wives, were charged 1d. Very little improvement in regard to postal matters took place for some years. In 1825 an Act was passed by Sir Thomas Brisbane, with the advice of the Council, "to regulate the postage of letters in New South Wales," giving power for the establishment of post-offices, and for the fixing of rates of postage. A proclamation was subsequently issued, fixing the rates of postage and the salaries and allowances of the postmasters; and at the same time persons were invited to tender for the conveyance of mails between Sydney and Parramatta, Windsor and Liverpool; between Liverpool and Campbelltown; and from Parramatta to Emu Plains, and thence to Bathurst. It was, however, not until 1828 that the provisions of the Act were put into full force. The rates of postage appear to have depended upon the distance and the difficulty of transmission. The lowest single inland rate was 3d., and the highest 12d., the postage on a letter increasing according to its weight, and the minimum fee being charged on letters not exceeding ¼ ounce. Letters between New South Wales and Van Diemen's Land were charged 3d. each (ship rate), and newspapers 1d. Other ship letters were charged 4d. single rate, and 6d. for any weight in excess. The privilege of franking was allowed to the Governor and a number of the chief public officials, and letters to and from prisoners passed free under certain regulations. In 1828 the total amount of salaries paid to the country postmasters was £34 7s. 9d., and the establishment in Sydney consisted of one principal postmaster, one clerk, and one letter-carrier. A letter-carrier was subsequently appointed for Parramatta, and he was authorised to charge the public 1d. on every letter delivered by him, which was his only remuneration. In 1831 a twopenny post was established in Sydney; and in 1835, under Sir Richard Bourke, the Act of 1825 was repealed, and another Act passed, which fixed the charge on a single letter at 4d. for 15 miles, 5d. for 20 miles, 6d. for 30 miles, and so on up to 1s. for 300 miles. In 1837 a post-office was established in Melbourne, which was then, of course, a part of New South

Wales. Stamps were introduced in the same year in the shape of stamped covers or envelopes, which are believed to have been the first postage stamps ever issued.

In the year 1838 the Sydney establishment had grown until it consisted of one postmaster-general, one accountant, six clerks, six letter-carriers, and one office-keeper, or fifteen persons in all. The revenue for that year was £8,390, and the expenditure was £10,357; there were as many as forty post-offices throughout the colony, which then included what are now known as Victoria and Queensland, besides which, as New Zealand was not a separate colony until 1841, the only post-office she had—at Korraika—was paid through the New South Wales Government. An overland mail to Adelaide was established in 1847, the postage on a single letter being 1s. 6d. The Postal Act was amended again in 1849, during the government of Sir Charles Fitzroy, when the postage on town letters was fixed at 1d., and on inland letters at 2d., while the postage on ship letters was 3d. in addition to the inland rate. The use of postage stamps in the present form was authorised, and the privilege of franking was abolished, petitions to the Queen, the Governor, and the Executive and Legislative Councils being the only communications allowed to pass free through the post.

From the discovery of gold in the year 1851 the history of the post-office has been one of progress and improvement. The Postmaster-General was originally a non-political officer, as the Registrar-General and the Auditor-General are at present. In the year 1855—the first for which an annual report was laid before Parliament—there were in the colony altogether 155 post-offices. The head office was in George-street, on the same site as the present edifice, but the structure was small and inconvenient, notwithstanding its doric columns and pediment in front. There were no electric telegraphs in the colony at that time, and the arrival of vessels at the Heads was signalled to the Observatory by means of flags and semaphores. It was in September, 1855, that the first railway was opened in New South Wales, and prior to that time the Southern and Western mails used to leave the General Post Office in old-fashioned mail coaches every evening. During that year the total number of miles travelled by the postal contractors, by coach and on horseback, was 1,023,255. The number of letters passing through the Post Office was 2,114,179, of which 617,041 are described as "foreign," or, in other words, were addressed to places beyond the colony. The number of newspapers was 2,100,989, of which 1,281,613 were inland, and 819,376 were "foreign." Book parcels and packets were not reckoned separately, but were counted as letters. Ten petitions to the Governor or the Council were conveyed free during the year. The revenue of the Department for 1855 was £24,902, and the expenditure was £60,221, while the staff numbered 223 persons in all, of whom 56 were attached to the office in Sydney. The annual report states, with something [illegible] to pride, that the communication with Victoria was not less th[illegible]imes a week.

The first iron pillar letter-receivers in Sydney were erected in 1856. During the same year 22 miles of railway were utilised for postal purposes, and 16½ miles were added in the following year. The number of letters delivered in Sydney in 1856 was 1,336,032, and in the country 1,481,416, being an average of about 10½ to every person in the community. There were 86,914 registered letters in 1857, and 7,873 oz. of gold were sent through the post that year, as against 23,712 oz. in the previous year. The postal revenue in the year 1857 amounted to £35,716, of which £34,031 was derived from the sale of stamps. The expenditure amounted to £63,865, out of which sum the conveyance of mails in the colony absorbed £41,324, without reckoning £20,000 towards the subsidy for the conveyance of English mails. In his report for 1857 the Postmaster-General is obliged to admit that the mail contract for the conveyance of mails between the Australasian Colonies and the United Kingdom had proved "an utter failure, so far as the stipulated time-table might be taken as a criterion." Only 10 monthly mail-steamers arrived that year, and but one to contract time; while only 11 were despatched. The time allowed was 58 days from Southampton to Sydney, and 56 days from Sydney to Southampton. In 1895 there were 1,470 post-offices in the colony, besides 502 receiving offices and three travelling post offices. The postal lines for that year extended over 33,693 miles, on which the mails were conveyed 2,649 miles by rail and tram, 824 miles by steamer, 19,545 miles by coach, and 10,675 miles on horseback. The number of miles actually travelled by the mails was 9,338,000, being an increase of 498,000 over the mileage of the previous year, and of 553,400 over that of 1893.

But while the number of miles travelled by the mails in 1895 was over nine times the mileage travelled in 1855, the number of letters posted during the same period had increased 32 times, and the number of newspapers over 21 times. In 1895 the number of letters was 68,079,000, of which 62,225,200 were posted within the colony, or 49 per head for every individual of the population. The number of newspapers was 44,902,900, of which the number posted in the colony during that year was 41,195,700, or 33 per head. Packets and book parcels numbered 11,259,200, of which 10,319,400 were posted within the colony, or about 8 per head; while in 1858, the first year in which they were enumerated separately, there were only 68,564 packets and parcels. Post cards were first introduced in 1876, when the number sent was 128,786; in 1895 no less than 906,000 were posted within the colony.

Double cards, which may be closed against inspection, and which are designated letter cards, were made available for the use of the public on the 1st July, 1894, the rate charged being 1½d. each. These cards may be transmitted within the colony, as well as to Victoria, Queensland, South Australia, Western Australia, Tasmania, New Zealand, Fiji, and British New Guinea. The number carried up to the end of the ye[illegible] 142,400, while 11,300 were received, making the total which passed through the post office 153,700. In 1895 the number posted was 320,000, and received from abroad 17,190, making a total of 337,190 passing through the office.

A parcels' post, for inland and intercolonial transmission, was inaugurated on 1st October, 1893, the maximum weight being fixed at 3 lb. and 11 lb., according to mode of conveyance. The number of parcels carried under this system up to the close of that year was 44,265; while during 1894 there were 349,218 parcels carried. The foreign system, which has been in force since August, 1886, added, in 1893, 19,437 parcels to the total already given; and in the following year, 18,672. In 1895 the total number carried was 422,777, of which 362,442 were inland, 39,721 intercolonial, and 20,614 foreign.

The progress made in regard to the means of postal communication with the United Kingdom and the continents of Europe and America is also marvellous. Instead of the unsatisfactory ocean mail service of 1857, which nominally brought monthly mails, with news 58 days old, there are now four great lines of ocean steamships, which bring mails *via* the Suez Canal at least once a week, the time occupied in the conveyance of the mails averaging 34 to 35 days. In addition, there is another mail service *via* San Francisco, which averages 38 days in transit between London and Sydney, and arrives and departs monthly; also a monthly service *via* Vancouver, by which mails are sent from Sydney to London in about 40 days. In the interests of trade, the Queensland Government subsidises a steam service with London *via* Torres Straits, and advantage is taken of these vessels to send mail matter. This route, however, is but little used by New South Wales. The following table shows as far as possible, the average time and the quickest time occupied in the transmission of letters by various routes between London and Sydney during 1895:—

Service.	London to Sydney.		Sydney to London.	
	Average Time.	Quickest Time.	Average Time.	Quickest Time.
	days.	days.	days.	days.
Per Peninsular and Oriental S. N. Co.'s packets, *via* Brindisi	$34\frac{8}{27}$	32	$34\frac{3}{13}$	33
,, Orient S.S. Co.'s packets, *via* Naples	$34\frac{6}{25}$	33	$34\frac{5}{13}$	33
,, Union S.S. Co.'s packets, *via* San Francisco	$37\frac{6}{13}$	36	$38\frac{1}{13}$	37
,, Messageries Maritimes' packets, *via* Marseilles	*	*	$31\frac{1}{4}$	30
,, Nord-Deutscher Lloyd's packets, *via* Brindisi	*	*	$36\frac{7}{13}$	34
,, Canadian-Australian packets, *via* Vancouver	*	*	$39\frac{6}{11}$	37

*These packets are not used by the General Post Office, London.

Regular steam communication with England was first established in 1852. Prior to that time the colony had to depend upon the irregular arrival and despatch of sailing vessels, but in that year the steamships Australia, Chusan, and Great Britain were despatched from England, making the voyage in 60 days, and causing a strong desire in the minds of the colonists for a more frequent and steady system of communication with the Old World. The outbreak of the Crimean War in 1854 hindered the accomplishment of this object for a while, but in 1856 a line of steamers was again started, and the service was carried on by the Peninsular and Oriental Company and the Royal Mail Company for some years, without, however, giving so much satisfaction to the public as might have been expected.

As far back as 1854 a proposal was made for the establishment of a line of mail packets *via* Panama, and negotiations on the subject were carried on for several years between the British Government and the Governments of New South Wales and New Zealand. The result was that in 1866 the line was started, and continued in operation until the end of 1868, when it was terminated through the failure of the company by which it had been carried out. In the following year this colony, in conjunction with New Zealand, inaugurated a mail service *via* San Francisco, which, with a few interruptions and under various conditions, has been continued up to the present time. The contract expired in November, 1890, and has since then been renewed from year to year, New South Wales at present paying a subsidy of £4,000.

The establishment of a mail route *via* America had the effect of stimulating the steamship owners who were engaged in the service *via* Suez, and from that time there was a marked improvement in the steamers laid on, as well as in the punctuality and speed with which the mails were delivered. The Peninsular and Oriental Company have, with very few interruptions, carried mails for the colonies almost from the inception of the ocean steam service until now. Towards the end of 1878 the Orient Company commenced carrying mails between Australia and the United Kingdom, and has continued to do so ever since. More recently the fine steamers of the Messageries Maritimes of France and the North German Lloyd's have entered the service between Europe and Australia, so that there are now one or two mails received and despatched every week.

During 1893 direct communication was established between Sydney and Vancouver Island, British Columbia, the New South Wales Government undertaking to pay an annual subsidy of £10,000 for the maintenance of this service for a period of three years. In May, 1896, this agreement was renewed for a further period of three years. Contracts were made in 1895 by the Imperial Government with the Peninsular and Oriental and the Orient Companies for the extension of the mail service until the 31st January, 1898; and in the beginning of 1897 a new contract was made, to take effect from 1st February, 1898, the ximum ti[illegible]y of the mails between Sydney and London being reduced, and the amount of the subsidy payable by Australia and Tasmania being also lessened.

The amount paid by each contributing colony, on the basis of population, towards the cost of the Federal Ocean Mail Service, for the year 1895, was as follows:—

	£	s.	d.
New South Wales	27,062	16	8
Victoria	25,537	10	0
Queensland	9,621	5	0
South Australia	7,625	5	0
Tasmania	3,406	6	8
Western Australia	1,746	16	8
Total	£75,000	0	0

The contribution from the United Kingdom is £95,000.

The approximate net cost to the colony of the Federal Ocean Mail Service *via* Suez, the San Francisco Service, and the Vancouver Service for the years 1893, 1894, and 1895 may be gathered from the following statement:—

Service.	Estimated Net Cost.		
	1893.	1894.	1895.
	£	£	£
Suez (per Peninsular and Oriental and Orient Companies)	13,155	12,877	12,438
San Francisco (per Union S.S. Co. of New Zealand)	2,050	1,892	2,123
Vancouver (per Canadian-Australian Line)	*3,763	7,846	9,041

* For the period from 18th May to 31st December.

A subsidy of £1,200 per annum was for several years paid to the A.U.S.N. Co. for the transport of mails between Sydney and New Caledonia, New Hebrides, Sandwich Island, and Fiji. The same company also provide a twenty-one days' service between the principal Islands of the New Hebrides Group. A subsidy of £1,000 was paid for this service between the Islands when it was a monthly one. These votes were allowed to lapse at the end of 1891.

In the year 1865 the office of Postmaster-General was made a political one, at first without, and subsequently with, a seat in the Cabinet. The old Post-office building in George-street was found so small and inconvenient that it was resolved to build a larger and more commodious edifice on the same site, and in 1863 the business of the department was removed to a temporary wooden building in Wynyard-square. It was not until 1873 that the construction of the new building was sufficiently advanced to allow of the offi [illegible] moving from the crowded and ill-ventilated structure in Wynya [illegible] here they had carried on their business under great disadvan [illegible] culties, to the p palatial structure, which is in every respect a credit to the colony. The head-quarters of the Electric Telegraph Department, the Money Order Office, and the Post-office Savings Bank are in the same building, so that the Postmaster-General has around him all the various branches over which he presides. The table given below shows the operations of the Post-office in five-year periods from 1855 to 1885, and annually since that date to the end of 1895. For 1885 and succeeding years, the figures showing the number of persons employed and the income and expenditure refer to the Department as a whole; prior to that year they refer to the Post Office only. Also, from 1885 the income is exclusive of interest on Savings Bank investments, and interest due on uninvested Savings Bank balances in the Treasury; and the expenditure is exclusive of interest allowed to Savings Bank depositors :—

Year.	Post-offices.	Receiving Offices.	Persons employed.	Extent of Postal Lines.				Distance actually travelled.	Cost of convey-ance of mails, Foreign and Inland.	Income.	Approximate expenditure.
				Railway, Tramway, and steamer.	Coach.	Horse.	Total.				
	No.	No.	No.	miles.	miles.	miles.	miles.	miles	£	£	£
1855	155	8	223	*	*	*	*	1,023,255	45,412	24,902	60,221
1860	289	*	289	60½	1,757½	6,413	8,231	1,461,518	44,303	45,613	71,391
1865	435	*	513	140¾	2,528	9,323	11,992	2,521,212	49,840	70,985	83,659
1870	562	*	690	339	3,865	10,038	14,242	3,062,458	48,649	84,441	86,722
1875	752	7	967	435	5,407	11,829	17,671	3,787,757	138,912	107,761	196,368
1880	927	119	1,536	891	8,717	12,819	22,427	5,246,373	174,238	194,084	268,128
1885	1,115	202	3,205	1,797	11,736	13,150	26,683	6,621,996	226,105	485,489	573,617
1886	1,157	217	3,168	1,948	12,540	12,606	27,094	6,891,200	233,723	503,646	603,784
1887	1,167	263	3,227	2,074	13,305	12,135	27,514	7,015,600	264,886	521,564	627,151
1888	1,203	288	3,387	2,219	14,411	11,530	28,160	7,144,500	248,403	570,800	613,566
1889	1,261	305	3,676	2,263	14,914	11,541	28,718	7,299,400	212,725	598,394	618,852
1890	1,338	325	3,821	2,273	15,774	11,547	29,594	7,463,000	231,467	637,975	677,216
1891	1,384	344	4,070	3,085	16,370	11,802	31,257	8,235,000	207,357	661,608	687,226
1892	1,423	377	4,478	3,217	17,467	11,616	32,300	8,568,700	210,426	652,268	740,118
1893	1,423	404	4,845	3,412	18,380	11,000	32,792	8,784,600	209,792	643,569	783,500
1894	1,445	450	4,982	3,473	19,331	10,260	33,064	8,840,000	214,670	626,864	763,976
1895	1,470	502	4,974	3,473	19,545	10,675	33,693	9,338,000	210,354	648,852	763,259

* Not recorded.

It will be noticed that the Postal Department is carried on at a considerable annual loss to the State. This is due in a great measure to the wide area over which the population of the country is scattered, which necessitates a proportionately large expenditure for the carriage of mails; and also to the fact that newspapers, which form the bulk of the mail matter, are carried free. But it has always been held that the safe and regular despatch and delivery of the mails is an item of too much importance in the political, commercial, and social life of the colony to be neglected, even though it should entail a heavy charge upon the general revenue. An additional sum of £84,000 would be obtai[illegible] adoption of a uniform rate of postage of 2d. per ½ oz. [illegible] colony, and the abolition of the free transmission of newspapers would produce a further sum of £25,000, making together £109,000. This would practically wipe out the deficiency in the postal revenue, exclusive of the interest charge on the cost of construction of telegraphs.

The revenue of the department for 1895 included the following amounts:—Postage (less approximate value of postage stamps used as duty stamps), £441,184; electric telegraphs, £149,102; telephones, £25,956; money order commission, £14,978; fees for private bags and boxes, £6,206; collections from other Governments, £4,505; poundage on postal notes, £6,317, and miscellaneous receipts, £603. The expenditure for the year comprised:—Salaries, £427,255; conveyance of mails, £210,354; cable subsidies, etc., £20,436; postal and telegraphic working expenses (various), £84,065; postage stamps re-purchased from the public and used as remittances by public officials, £15,477; and allowances to Railway Department for transacting postal and public telegraph business at railway offices, £5,671. Exclusive of 809 mail contractors and 89 mail porters, 4,974 persons were employed by the Department, of whom 1,277 were engaged in the head office. The following return will give an idea of the magnitude of the work done by the Post Office of New South Wales:—

Year.	Number of Letters.		Number of Newspapers.		*Packets & Book Parcels.		Post Cards.
	Beyond the Colony.	Inland and town.	Beyond the Colony.	Inland.	Beyond the Colony.	Inland.	
1855	617,041	1,497,138	819,376	1,281,613	‡......	‡......	......
1860	868,746	3,362,015	910,478	2,758,305	12,196	71,540	......
1865	1,106,045	5,222,308	1,028,954	3,660,904	28,852	221,052	......
1870	1,103,200	5,980,300	1,206,600	2,608,100	36,700	121,000	......
1875	1,719,100	11,998,800	1,385,900	4,876,700	82,300	274,700	......
1880	2,776,000	18,956,500	2,381,200	11,409,800	146,600	565,000	153,360
1885	5,328,200	34,023,000	3,987,900	21,579,500	552,600	2,894,200	341,000
1886	5,582,700	37,267,200	4,276,300	†23,210,000	865,800	3,983,000	348,700
1887	5,624,000	39,221,900	4,744,400	†25,617,600	980,800	4,549,900	442,100
1888	6,202,800	42,783,200	5,255,000	28,500,400	1,041,600	5,560,800	520,920
1889	6,346,700	47,624,600	5,599,000	30,931,800	1,305,000	6,564,400	630,100
1890	8,109,300	54,908,400	6,949,900	33,647,300	2,214,300	6,725,300	677,400
1891	9,145,600	59,033,000	7,233,400	35,283,900	2,902,100	8,166,400	808,700
1892	11,549,600	65,025,800	9,529,300	35,991,200	3,274,900	9,105,300	827,360
1893	10,616,500	66,924,000	9,055,600	35,872,300	3,287,100	8,773,500	850,420
1894	11,125,500	56,867,800	9,503,800	32,163,500	5,654,100	7,919,500	§1,170,000
1895	11,974,300	56,104,700	9,235,700	35,667,100	4,206,200	7,053,000	§1,294,700

* Not including packages transmitted by parcels post. † Estimated.
‡ Included with letters. § Inclusive of letter-cards.

The progress exhibited by the table just given is astonishing. In 1855 the total number of letters and newspapers, inland and foreign, was only a shade over 2 millions each, whereas in 1895 the number of letters had grown to 68 millions, and newspapers to nearly 45 millions, without reckoning over 11¼ million packets and book parcels which, in the year first mentioned, were included with the letters.

The charge on letters between the Australasian colonies and the United Kingdom, which had for a long period been at the rate of 6d. per half-ounce *via* Italy, and 4d. by the long sea route, was reduced in

1891 to 2½d. By an arrangement made at the Postal Congress held at Vienna in the middle of 1891, New South Wales, as well as the rest of the Colonies of Australasia, entered the Universal Postal Union on the 1st October, 1891. The effect of this has been to extend the reduced rate to all countries embraced in the Union. The letters posted in New South Wales to countries outside Australasia increased from 986,400 in 1891 to 1,101,000 in 1892, the newspapers from 793,600 to 873,100, and packets from 142,000 to 194,900; but in 1895 the number of letters had fallen to 1,096,500, and of newspapers to 613,600, while packets had increased to 307,400.

By an enactment made in June, 1893, it is required that newspapers be registered at the General Post Office, and both newspapers and supplements must be printed in New South Wales, from type set up therein, in order to entitle the publications to be transmitted as newspapers. If posted within seven days from the date of publication, newspapers are transmitted within the colony free, if not exceeding 10 oz. in weight, and at the rate of ½d. each for every additional 10 oz. Newspapers for Victoria, South Australia, Western Australia, Tasmania, New Zealand, and Fiji (if printed in New South Wales) are charged ½d. each up to 10 oz., and ½d. for every additional 10 oz.; and to Queensland and British New Guinea, ½d. for every 2 oz. To the United Kingdom or foreign countries the charge is 1d. each for any weight up to 4 oz., and ½d. for every additional 2 oz., the rates having been assimilated in October, 1894.

The following figures show the number of registered letters passing through the General Post Office in each of the last ten years:—

Year.	Number.	Year.	Number.
1886	388,573	1891	1,047,080
1887	419,388	1892	1,075,241
1888	555,207	1893	812,036
1889	646,151	1894	856,128
1890	780,202	1895	902,448

Of the registered letters in 1894 and 1895, there were respectively 273,309 and 326,626 from and to places beyond the colony, and 582,819 and 575,822 inland.

The great increase in the number of registered letters up to 1892 was not a natural growth, but was largely due to correspondence relating to the so-called "consultations," or lottery-sweeps connected with horse-racing, probably one-third of the letters registered in 1892 being associated with these sweeps. The Government dealt with this evil in an Amending Postal Act, assented to in 1893. This Act provides that letters addressed to promoters of sweeps within the colony, whose names have been gazetted, shall not be delivered to the addressees, but opened and returned to the senders. The great fall in 1893 in the number of registered letters received at the General Post Office was due to the operations of this Act.

Compared with the other provinces of Australasia and with the United Kingdom, New South Wales occupies a favourable position as regards the number of letters, post cards, and newspapers carried per head of population, as may be seen from the following table :—

Country.	Number per head of population.		Country.	Number per head of population.	
	Letters and postcards.	News-papers.		Letters and postcards.	News-papers.
New South Wales ...	55	36	New Zealand	44	18
Victoria	54	19	Australasia	51	27
Queensland	40	26	United Kingdom......	54	4
South Australia	48	25	England and Wales..	59	4
Western Australia ...	99	98	Scotland	47	4
Tasmania	38	28	Ireland.............. ...	28	4

New postal routes to the extent of 1,086 miles were opened during 1895, while 629 miles of routes were abandoned.

MONEY ORDERS AND POSTAL NOTES.

The money order system was brought into operation in New South Wales in January, 1863, when nineteen offices were opened—the head office in Sydney, and eighteen branch offices in various parts of the colony. In June of the same year the operation of the system was extended to the United Kingdom and all the Australasian colonies with the exception of Tasmania, and the number of offices in the colony was increased to forty-seven. The colony of Tasmania entered into the arrangement in 1865, and the Department has continued steadily to progress. In 1895 there were 624 Money Order Offices in the colony, eleven new offices having been established and two abolished during the year. Postal notes were introduced on the 1st October, 1893. They range in value from 1s. to 20s., and may be obtained at all Money Order Offices, the poundage varying from 1d. to 4d. Postal notes may be exchanged between New South Wales and the other Australasian colonies except Western Australia and New Zealand. The revenue derived from the postal note system during the last quarter of 1893 was £548 17s. 10d.; during the year 1894, £3,877 13s. 4d.; and during 1895, £6,316 12s. 4d. In the chapter dealing with Private Finance, further particulars of the money order and postal note systems will be found.

POST OFFICE SAVINGS BANK.

The Post-office Savings Bank, which, like the Money Order Office, is under the control of the Postmaster-General, was established in the year 1871 at the General Post Office, Sydney, with branches at the principal country towns. The growth of this branch of the service has fully kept pace with those already mentioned. In 1895 there were 499 Post-office Savings Banks in various parts of the colony, an increase of 17 over the number open in the previous year. During the year 42,276 new accounts were opened, and 33,368 accounts were closed, the number of accounts remaining open at the close of the year being 131,703. The amount of deposits received was £2,194,134,—an increase of £33,524 as compared with the business of the previous year. The sum of £128,641 was added to depositors' accounts for interest. The balance to the credit of depositors at the end of the year was £4,121,700. The average amount of each deposit was £7 8s. 0¾d., and the average balance at the credit of each depositor was £31 5s. 10¾d. Further information respecting the Post-office Savings Banks will be found in the chapter on Private Finance.

TELEGRAPHS.

The electric telegraph was first used by the public of New South Wales on the 26th January, 1858, when the line from Sydney to Liverpool, 22 miles in length, was brought into operation. From this small beginning the system has increased until in 1895 there were 834 stations in the colony, and 12,316 miles of line open, carrying 28,799 miles of wire in actual use. The following table gives a view of the business of the Electric Telegraph Department, from 1865 to 1895:—

Year.	No. of Stations.	Number of Telegrams despatched, received, and passed through the Colony.	Revenue received.	No. of miles of Line.	No. of miles of Wire.	Cost of construction.
			£			£
1865	55	*138,785	29,769	....	2,989	145,446
1870	86	*173,812	28,550	....	5,247	195,545
1875	137	*719,745	48,657	....	8,012	253,391
1880	289	1,319,537	84,110	....	13,188	462,226
1885	404	2,625,992	155,073	....	19,864	641,669
1886	425	2,661,126	158,128	....	20,797	666,028
1887	434	3,258,733	164,511	....	21,444	684,600
1888	460	3,936,830	185,965	....	22,219	704,912
1889	485	3,932,670	186,862	10,732	22,606	713,663
1890	628	4,101,449	193,707	11,231	23,598	743,698
1891	674	4,046,251	191,319	11,697	24,780	767,872
1892	706	2,976,109	185,014	11,905	26,443	801,918
1893	724	2,853,691	157,482	12,097	27,326	820,822
1894	813	2,464,074	147,903	12,201	28,085	831,471
1895	834	2,635,456	145,901	12,316	28,799	840,380

*Number despatched only.

The number of telegrams received and despatched during the year, inland telegrams being counted once only, amounted to 2,522,106, or about 2 per head for every individual of the population.

The state of telegraphic construction in the principal countries of the world [illegible] able dates is given herewith. The figures are interesting, though the circumstances of Australasia and the older countries are so dissimilar as to make a comparison between them more curious than valuable:—

Country.	Length in Miles—		Country.	Length in Miles—	
	Of Line.	Of Wire.		Of Line.	Of Wire.
Australasia	47,618	98,910	Italy	24,349	94,149
Argentine Republic ...	20,415	......	Japan	9,386	28,070
Austria-Hungary	43,672	145,777	Mexico	39,193	......
Belgium	3,928	19,564	Netherlands	3,465	12,396
Brazil	9,884	21,130	Norway	5,138	8,079
Canada	31,841	69,111	Portugal	3,483	10,292
Cape Colony	6,442	......	Russia	74,276	171,663
Chili	11,465	......	Spain	14,710	33,552
Denmark	3,010	8,515	Sweden	5,379	15,188
France	73,550	275,370	Switzerland............	4,473	12,477
Germany	79,382	298,833	Turkey..................	20,380	31,890
Greece.....................	4,781	5,836	United Kingdom ...	33,062	220,975
India (inclusive of Native States.)	44,648	138,256	United States.........	190,303	790,792

CABLE SERVICES.

At a Conference of the Postal and Telegraph authorities held in Sydney in February, 1891, the question of the cable rates came under discussion, and a proposal of the Eastern Extension Telegraph Company was agreed to, by which the colonies of New South Wales, Victoria, South Australia, Western Australia, and Tasmania undertook to make good half the loss which the Company would sustain by a reduction in the schedule of cable charges. The amended cable rates came into force in May, 1891. For European messages the rates were reduced from 9s. 4d. to 4s. per word for ordinary messages, from 7s. 1d. to 3s. 6d. per word for Government messages, and from 2s. 8d. to 1s. 10d. per word for press messages, proportionate reductions being made for messages to countries other than those in Europe. The amount to be guaranteed to the Company for the time during which the contract was in existence was one half of the amount of receipts short of the sum of £237,736 (the amount of the Company's receipts in 1889, after deducting out-payments), the other half of the loss to be borne by the Company. Under this agreement, New South Wales had to pay in 1892 the sum of £15,397 7s. 8d. A conference held in Melbourne decided, in view of the heavy loss to the colonies, to increase the rate for ordinary messages from 4s. to 4s. 9d. per word, the extra cost being apportioned as follows:—To the Cable Company, 7d. per word; to South Australia, 2d. per word. The new rates came into force on 1st January, 1893, concurrently with an arrangement under which

New Zealand became a contributor, on the same terms as the other colonies, towards the guarantees to the Company and South Australia in connection with the reduction in the international rates.

From May, 1893, to April, 1894, the amount paid by New South Wales to the Cable Company in respect of the guarantee in connection with the reduced rates mentioned above, was £2,056 4s. 6d., £272 12s. 8d. also being paid to South Australia. The total contribution for the year in respect of cable service was £19,598 18s. 4d. The amounts paid by the colony for the year ended 30th April, 1895, were:—Duplicate Cable Subsidy between Port Darwin and Banjowangie, £13,150 15s. 10d.; Tasmanian Cable Subsidy, £1,704 14s. 8d.; South Australian Guarantee, £373 11s. 9d.; New Zealand Guarantee, £2,430 2s. 10d.; total, £17,659 5s. 1d. The receipts of the Cable Company in respect of the Australian business for the twelve months, being in excess of the amount of the guarantee in connection with the reduced rates, New South Wales and the other colonies were not called upon to contribute anything towards this guarantee. For the year ended 30th April, 1896, the receipts of the Cable Company and of the South Australian Government in respect of the Australasian business were both in excess of the amounts guaranteed (£227,000 and £37,552 respectively), and the only contributions which New South Wales was called upon to pay during the year were therefore:—Duplicate Cable Subsidy between Port Darwin and Banjowangie, £13,150 15s. 10d.; Tasmanian Cable Subsidy, £1,704 14s. 8d.; and New Zealand Guarantee, £1,311 7s. 6d.; total, £16,166 18s., exclusive of the guarantee in connection with the New Caledonian mentioned below.

In the early part of 1892 an agreement was entered into between New South Wales and the Société Française des Télégraphes Sousmarins (now known as the Compagnie Française des Cables Télégraphiques) by which the latter undertook to lay down a submarine cable, for the purpose of establishing telegraphic communication between Queensland and New Caledonia, in consideration of New South Wales and Queensland each guaranteeing a sum of £2,000 yearly for a period of thirty years. Provision was made that the Governments should have the use of the cable for official messages up to this amount. In October, 1893, the cable was opened.

The construction of a Pacific cable, to connect Canada and the Australasian colonies, was advocated by an Intercolonial Postal and Telegraphic Conference, held in New Zealand during March, 1894, and was reaffirmed by conferences of a similar character, which met in Hobart in February, 1895; and in Sydney, in January, 1896. The Colonial Conference, which sat in Ottawa in the early part of 1894, also recommended that such a cable should be constructed; and the Secretary of State for the Colonies appointed a Commission, on which the British, Canadian, and Australasian Governments were represented, for the purpose of inquiring into the best route for the cable, and the probable cost of its construction. This Commission recommended the adoption of the proposals made at the Sydney Postal Conference, which provided for the distribution of the cost of construction and maintenance equally between Great Britain, Canada, and Australasia, and fixed the landing places within British territory.

The following table shows the amount of outward business transacted by New South Wales with Europe and the East during the last six years :—

Year.	Cable Messages sent from New South Wales.	Amount received.	Year.	Cable Messages sent from New South Wales.	Amount received.
	No.	£		No.	£
*1890	10,316	47,878	1893	15,587	50,625
†1891	14,982	46,192	1894	15,146	50,567
1892	16,511	41,746	1895	17,761	60,652

* At old rates. † Partly old, partly new rates.

Compared with 1890, the year 1895 shows, therefore, an increase of 7,445 messages, and of £12,774 in revenue.

TELEPHONES.

The total number of lines connected with the telephone system of the colony on the 31st December, 1895, was 3,812, of which 3,429 were in Sydney and suburbs, and 383 in the country. The number of telephones in use was 4,096. The length of wire used in transmission of messages cannot be given, as the telegraph wires are largely used for telephones also. Some particulars regarding telephones in the Australasian colonies in 1895–6 will be found in the following table :—

Colony.	Exchanges.	Telephones.	Length of Wires (distinct from Telegraph Wires).	Revenue.
	No.	No.	miles.	£
New South Wales	18	4,096	*.........	25,956
Victoria	13	2,609	9,887	36,266
Queensland	18	776	8,331	4,977
South Australia	8	902	2,461	13,755
Western Australia	2	494	462	3,837
Tasmania	3	627	520	3,049
New Zealand	26	5,143	4,947	25,934

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